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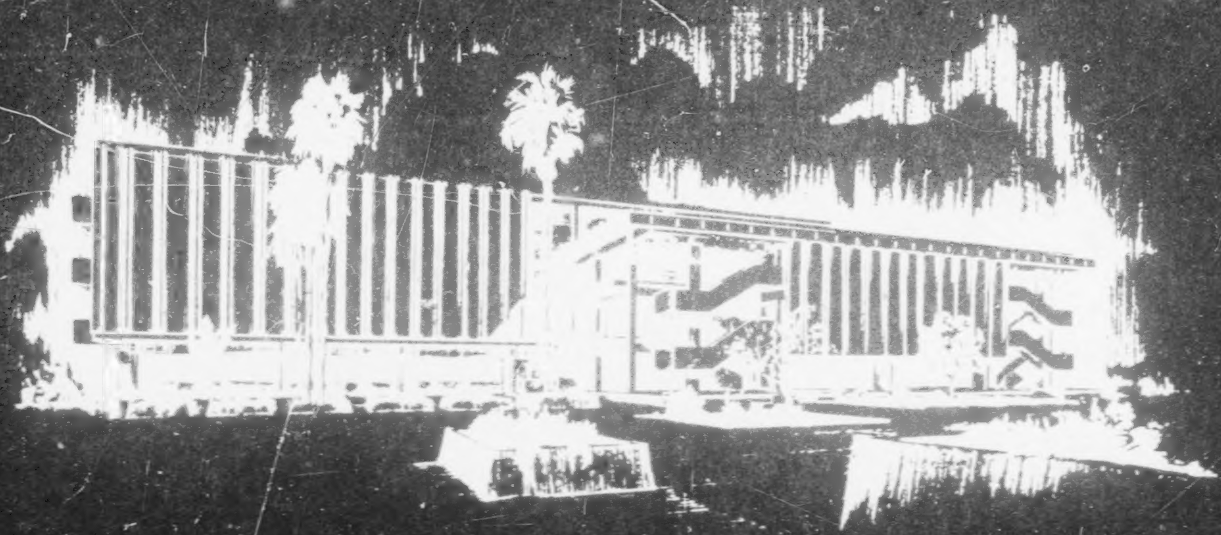
ARIZONA BUSINESS



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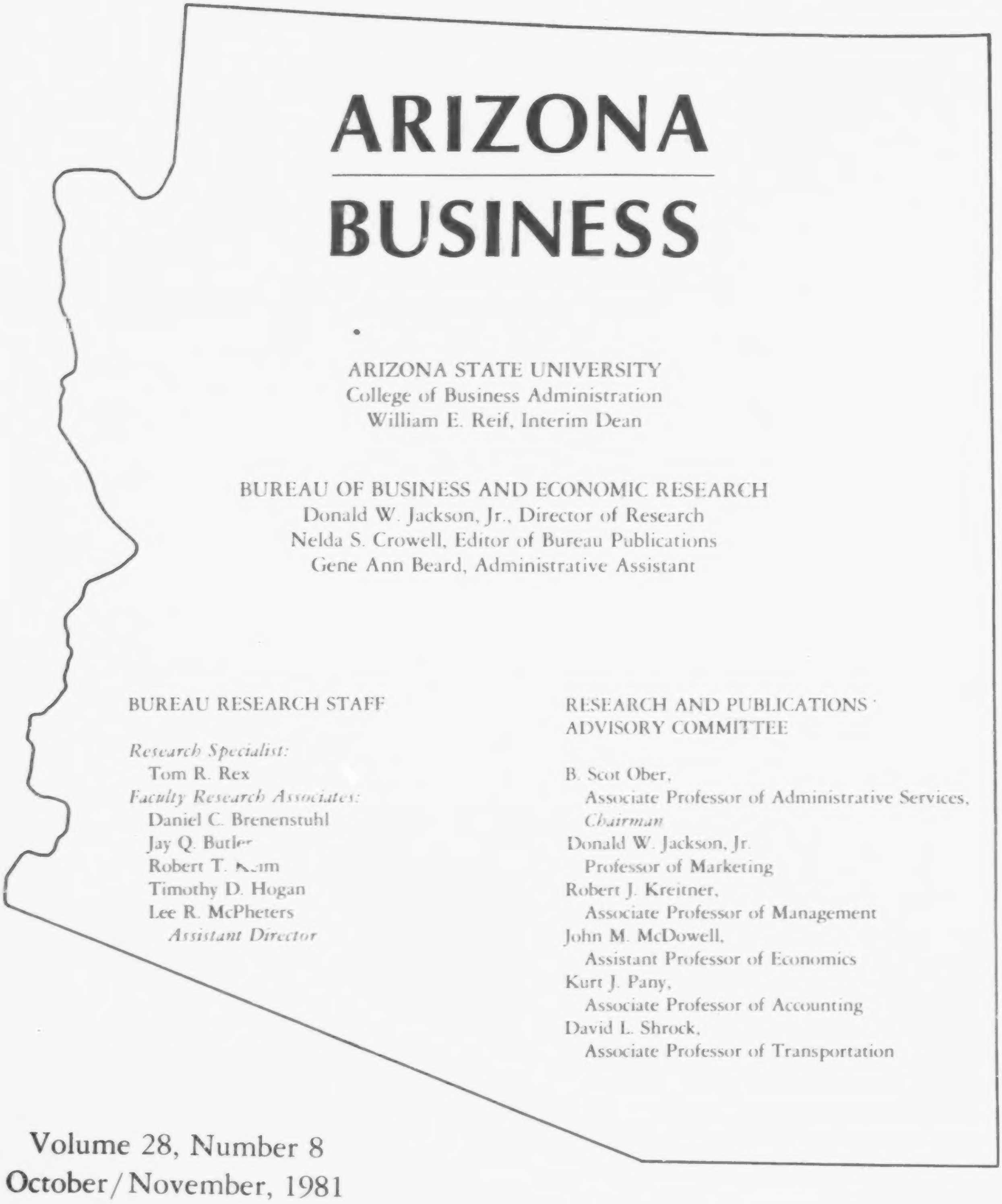

ARIZONA BUSINESS

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Report to The Reader

When an individual lives in a small community but goes to a larger community to shop, merchants and government officials in both communities need to be aware of the extent of such activity.

An article by Robert H. Williams of Northern Arizona University in Flagstaff analyzes the problem of outshopping in this issue of *Arizona Business*. Dr. Williams says that while outshopping can be a problem for the small communities, it can also represent an opportunity for the larger cities.

He further suggests that by concentrating on the things that it does best, a small community can study the outshopping problem and develop its own comparative advantage. Small communities, he says, offer such attractions as ease of parking, friendly personnel, bucolic and original settings. They can use these assets to their own advantage, not only in holding their own local customers, but also in drawing outshoppers from the city.

Dr. Williams' study focuses on the outshopping syndrome that occurs among residents of Flagstaff who travel to Phoenix for a wide variety of purchases. His survey of goods purchased outside of Flagstaff showed that approximately a third of the purchases for furniture and automobiles were made outside the city. Furthermore, more than one-fourth of the purchases for men's and women's dress and formal wear, home furnishings, and home entertainment were made outside of Flagstaff.

He suggests that such outshopping can be partially counteracted by instituting an effective newcomer program and by effective promotion to inform residents about product offerings. "Shopping areas, malls, neighborhoods, and others must work together to inform residents of what is available and where," he stresses.

CALL FOR MANUSCRIPTS ON HEALTH CARE

Health care will be the theme of a future issue of *Arizona Business*. Authors wishing to submit articles on the topic should send manuscripts to *Arizona Business*, Bureau of Business and Economic Research, College of Business Administration, Arizona State University, Tempe, AZ 85287. Deadline is February 1, 1982.

Small Computer Systems: An Overview

ROBERT T. KEIM
TIMOTHY J. O'LEARY

Small computers have been developed specifically for business applications. This article attempts to give an overview of the field in an effort to help the small business balance needs and wants in the selection of a computer.

Robert T. Keim and Timothy J. O'Leary are faculty members in the Department of Quantitative Systems, College of Business Administration, Arizona State University.

The computer industry has virtually exploded since the mid-1970s. Large and small business computer systems are expected to generate $2 billion in revenues this year alone. These markets are expected to surge ahead to $5.5 billion by 1982 and to experience an annual growth of 35 percent over the next three or four years.[1]

A brief review of the history of computer technology will better illustrate this unprecedented growth. Today's smallest microcomputer and largest mainframe computer share a common ancestor - the MARK I. This computer, developed in 1944, used electromechanical relays to analyze and run its hand-wired programs. In 1946, the first generation electronic computer, the ENIAC (Electronic Numerical Integrator and Computer) used vacuum tube technology. This computer operated from 1946 to 1958 and was designed to compute missile trajectories. Like its predecessors, all programs for this computer were hand wired and required days to reprogram. During the 1950s the hand-wired program was replaced by the concept of a stored program in the memory of the computer, and the second generation computer was born out of transistor technology. It was during this generation that IBM aggressively entered the industry.

The years 1964-1966 were marked by three notable events: IBM introduced the 360 line with integrated circuits which gave the company world-circle domination. DEC (Digital Equipment Corporation) introduced the PDP series including the PDP 8, the most successful minicomputer. CDC (Control Data Corporation) introduced the CDC 6600, a large high speed computer for the most complex numerical computations.

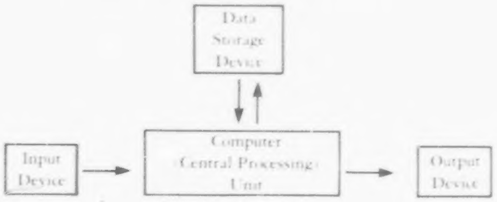
What some refer to as the fourth generation computer was ushered in by Intel in 1971 with the introduction of the 4004 microprocessor. This most recent innovation is based upon large scale integration (LSI) in which several thousand transistors can be realized on a chip. Unlike the previous computer generations that dealt primarily with scientific applications, this generation has had significant and profound effects on business applications. Small computers have been developed specifically for business applications. These computers sacrifice some of the speed and the accuracy of the larger computers in order to gain relatively inexpensive and reliable data processing capabilities.

WHAT IS A COMPUTER?

The equipment and operation of a small computer system is very similar to that of a large mainframe computer. The operation requires the interaction of two components: hardware and software. The hardware is the physical equipment of the computer system, and the software is the set of instructions or programs necessary to run the system. Figure 1 presents the hardware of a basic computer system.

FIGURE 1

HARDWARE OF A BASIC COMPUTER SYSTEM



Basic Computer System

Source: Developed by the author.

Data processing begins with the input device. This device converts information from the human language into computer language and sends this information to the computer. The traditional types of input devices used by small business computers include tape, disk and terminal. Magnetic tapes are similar to sound tapes, and disks are very similar to phonograph records except that the recorded information is numeric or alphabetic. These input media require the information to be previously stored on them. A more current type of input device, especially for smaller business systems, connects the user directly to the computer via a terminal. This is generally accomplished by a keyboard attached to a cathode ray tube (CRT).

Output devices reverse the input process of input. They convert the computer language back to human language and are used to generate reports, lists, and diagrams. The most common output device is a printer which produces a typed permanent report. Other common output devices are a plotter, tape, disk and CRT.

A data storage device saves information in machine-readable form so that it can be quickly read by the computer's central processing unit. Its function is similar to the input devices, but it is much faster because it stores information in the computer's language. As with data input and output, various types of storage media can be used—punched cards, magnetic tape and disk.

The input, output, and data storage devices are merely peripheral equipment serving the central processing unit, which is the actual computer. First, the arithmetic unit performs arithmetic tasks and logical work of the computer. Second, the control unit controls and coordinates all the operations of the computer. Finally, the memory holds the data which the computer is currently manipulating and holds the program which the computer is currently using.

WHAT'S IN A NAME: MINICOMPUTER OR MICROCOMPUTER

In most discussions of small business computers, the terms minicomputer and microcomputer are mentioned and frequently are used interchangeably. It is difficult to distinguish between a minicomputer and a microcomputer because the industry and technology is changing so rapidly. The typical distinction has been by cost, memory size, and speed. In 1972 a minicomputer had a memory capacity of less than 32,000 characters and cost $50,000 to $100,000. Today minicomputers have memory up to 512,000 characters and cost $30,000 to $200,000. Microcomputers have memory up to 128,000 characters and cost $5,000 to $30,000. As technology advances, memory size and speed will increase and costs will decrease further.

Microcomputers have an obvious and significant cost advantage compared to minicomputers. The disadvantages of microcomputers are a result of their recent existence. One potential disadvantage is vendor reliability. Many of the microcomputer vendors are small and recently organized. Therefore, they do not have established service and performance records, minicomputer vendors on the other hand, are larger and more established. Another potential disadvantage is that relatively few tested software packages are available for the microcomputers. This disadvantage presumably will be greatly minimized in the next few years as the sales of microcomputers and demand for their software packages increase.

Because of the low costs of the minicomputers and microcomputers, a radical change is occurring in the entire data processing function—system development, programming, data entry, and computer operations are shifting in the direction of the user. James F. Collins, corporate vice-president for Management Information Services (MIS) at Johnson & Johnson, commented on this effect on large firms,

> It is the emergence of the minicomputer that challenges MIS most today. With it, business is entering a new era of computer utilization. Minicomputers are powerful and relatively cheap . . . With the

dramatic increase in the use of minicomputers, it is reasonable to anticipate that in the next five years, traditional large-scale business computers will be in a small minority.[2]

Greg R. Leveille, computer industry analyst for Creative Strategies International commented on this effect on small business. "Over the next five years, the owners of very small businesses will be faced with an increasing pressure to electronically automate their business practices."[3]

Clearly, small computers represent a tremendous challenge to both large and small businesses in the 1980s. Small businesses, however, are not as prepared to meet this challenge. First, the time and the energy of their key personnel must be focused on day-to-day survival. It has been reported that 500,000 new businesses are started each year in the United States, and that 400,000 businesses close in that same year.[4] Second, unlike their large counterparts, small businesses typically do not have highly trained computer experts available to them. This creates a terminology barrier for small business people into the esoteric world of minicomputers, microcomputers, microprocessors, peripherals, floppy disks, RAM, etc. Tom Fox, systems editor for *Interface Age*, commented on this problem. "Even living in the computer industry, we were unprepared for the huge number of machines that exist, and the complexity contained in each one. It made us appreciate some of the headaches the ultimate user must endure in selecting a computer system."[5]

WHAT TO LOOK FOR

What Do I Need?

Deciding on a computer system for any business, large or small, is a process that requires expertise in a variety of areas. Most large businesses have staff trained in systems design, programming, operation and user assistance. The small business approaching computerization for the first time does not usually have the resources or the expertise to hire new personnel with the appropriate skills. This dilemma is becoming increasingly troublesome for many owners and managers of small businesses as the cost of hardware lessens and the availability of reliable systems increases.

A typical introduction to computerization for a smaller business comes from a contact by a computer salesperson. When an organization is targeted by a computer salesperson as a potential client and makes a presentation on a particular computer system—hardware and software—the process begins. Most people who are stimulated by such a presentation decide to explore other alternatives and quickly discover many alternative ways of computerizing their business needs within a wide range of costs.

Although a wealth of terminology and alternatives are available, basically there are four ways to acquire computer resources for business data processing. These include:

Timesharing. This option is similar to the service bureau in that the actual computer and programs are provided by the timesharing company. The user acquires an input and output device e.g., a computer terminal. Instead of preparing the input data on forms, the user directly inputs the data on the terminal connected to the computer by a telephone link. The output reports are typed on the terminal at the user's sites when the computer finishes the processing.

Turnkey System. In this alternative, the business contracts with a single computer vendor to provide all the necessary hardware and software. Much of the software consists of these applications that are previously written computer programs to accomplish standard business processing, e.g., payroll, inventory, accounts payable, etc.

Service Bureau. The business contracts with a company that sells computer capability in the form of applications, i.e. payroll, accounts payable, professional time billing, etc. In this alternative the business fills out data entry forms, sends them to the service bureau and receives the computer generated reports. This alternative uses processing at the service bureau and requires no equipment at the user location.

Custom System. This alternative can take many forms. A turnkey system can become a custom system if the computer vendor personalizes the application programs to meet the business processing requirements of the user. This type of personalizing of the programs is obviously more expensive than so called "off-the-shelf" programs that the vendor has already in the library. At the other end of this custom system spectrum is the user who purchases different components, both hardware and software, from different vendors and assumes the responsibility of integrating all of these components.

The selection of the appropriate alternative for any given business depends upon a number of tradeoffs with respect to cost, timing, volume and performance. The selection of the appropriate alternative for a small business should not be made until an extensive evaluation of the business processing needs has been accomplished. The successful implementation of any computerized business system must be approached with the same care and deliberation as any other major capital investment. Furthermore, an assessment of the impact on people in the organization must be made. The introduction of a computer system often changes the way paper flows and work gets accomplished in the organization. An improperly designed system and improperly trained personnel are the most frequent causes of problems when introducing new computer applications.

What Do I Want?

Before deciding on the business processing *needs* of the organization, the owner or manager should first ask "What do I want?" The answer to this question will help to determine the type of alternative and associated costs of meeting all of the "wants." The actual difference between "needs" and "wants" is often a matter of cost.

The computerization of a small business will not solve all of the paperwork problems of the business at a low cost. The computer system should be regarded as a tool that can assist and facilitate the paper flow and reduce the time and cost associated with this flow.

The manager or owner of a small business should not expect a computer system to solve problems associated with existing systems in the organization. If the systems are not working well as manual systems, they won't work when computerized. In fact, in the computerized version, problems occur more quickly and have a greater impact on the organization.

Feasibility Studies

To avoid many common pitfalls of computerization, the organization should undertake a feasibility study or systems analysis of the organization. The outcome of such a study, if conducted properly, will identify all applications that are candidates for computerization as well as existing systems that might have to be redesigned to take advantage of computer processing.

The final step of such a study will be to select one of the alternatives for computerization discussed earlier. It is important to realize that the owner or manager should study the possibilities thoroughly before approaching the computer salespeople for the selection of hardware and software. Identifying the wants and needs of the organization will ease the confusion that often results when a computer novice tries to deal with terminology like "floppy disk," "lines per minute," "megabytes," etc., while trying to evaluate the capabilities of the application programs available through the various vendors.

Specifying the Needs and Wants

The systems analysis or feasibility study can be accomplished in phases or steps that result in the following products:

Statement of Needs. This document should include the goals and objectives of the business along with a brief description of the nature of the business. Included in this document will be a listing of the business functions to be considered for computerization. Some of the most common applications, listed by function, are included in Table 1. Any systematic, repetitive application should be considered.

TABLE 1

FUNCTIONS/APPLICATIONS TO CONSIDER

A. Accounting
  1. Accounts Payable
  2. Accounts Receivable
  3. General Ledger
  4. Journal Entry
  5. Cash Flow Analysis
  6. Financial Statements
  7. Payroll
  8. Other

B. Finance
  1. Capital Budgeting
  2. Forecasting
  3. Financial Rate Analysis
  4. Other

C. Production
  1. Inventory Control
  2. Production Scheduling
  3. Shipping
  4. Aggregate Scheduling
  5. Material Requirements Planning
  6. Other

D. Marketing
  1. Impact Analysis (e.g. advertising, distribution)
  2. Forecasting
  3. Sales Analysis
  4. Other

E. Miscellaneous
  1. Engineering—Graphics Design
  2. Manpower Planning
  3. Purchasing/Vendor Analysis
  4. Word Processing
  5. Other

Source: Developed by the author.

Detailed Information Requirements. Within each application identified in the Statement of needs, a number of specific questions must be answered. For each application the desired output reports should be identified and specified. In addition a detailed input description is necessary that includes: source of data; number of input entries; amount of data per input entry; requirements for data retention; and audit trail requirements. The final specification in this document will discuss the processing requirements—the way that the data is transformed into the desired output reports, including any special requirements for processing such as frequency of processing, multiple options, etc.

System Configuration Statement. When all of the applications have been specified in detail, the input, storage and processing requirements are accumulated to determine overall hardware and software requirements. This document will be the focus of the acquisition of appropriate hardware and software. By specifying the business needs and wants before evaluating various systems, the small business will be in a better position to get a system that meets their needs.

At this point in the process, the business owner or manager must evaluate the various vendor proposals, draw up a performance contract, manage the implementation of the system and establish evaluation criteria for the operation of the system.

CONCLUSION

The task of computerizing a business is a complex and lengthy process. The small business person considering such a move should not make rash or impulsive decisions. The key to a successful selection and acquisition of a computer system is to maintain the control of the process. It is important to understand the needs and wants of the organization and to specify a system configuration within the financial means of the organization. After the selection is made, the implementation of the system has to be managed. Finally, the ongoing system should be under evaluation and audit to ensure that the organization benefits fully from this tool of automation.[6]

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[1] John L. Kirley, "A Survey: The Small Systems Market," *Datamation* 25 (November, 1979).

[2] Joseph Ferreira, and James F. Collins, "The Changing Role of the MIS Executive, *Datamation* 25 (November, 1979).

[3] Greg R. Leveille, "Small Business Computers, The Need for Them Is Increasing," *The Office* 90 (July, 1979).

[4] Kirley, "A Survey.

[5] Tom Fox, "Looking at Micro-Based Business Systems," *Interface Age* (June, 1980).

[6] Research for this article was sponsored by a grant from the Arizona State University Faculty Grant-in-Aid program.

Outshopping: Problem or Opportunity?

ROBERT H. WILLIAMS

Opportunities are frequently disguised as problems. For example, many merchants in smaller towns classify outshopping as a real problem. To illustrate, consider the following three cases:

Case 1: You live in a small town in northern Arizona. Three times a year you and your family travel to Phoenix to see the sights, enjoy the weather, shop in the malls, and generally enjoy yourself. You make many special purchases for such things as clothes and home furnishings during these trips.

Case 2: You live in a small town in southern Arizona. You are shopping for a new automobile. You are unsatisfied with the model alternatives and prices in your local community. Consequently, you spend two days car shopping in Phoenix. You find an acceptable car and make a deal.

Case 3: You live in a small town in eastern Arizona. You are generally dissatisfied with shopping conditions in the town. You regularly travel to Phoenix to purchase all but food and absolute emergency items.

All three cases describe outshopping—individuals and households making consumer type purchases outside of the retail trade area in which they live.[1] In some situations (as in Case 1), the motivation for outshopping is at least partially for entertainment and the utility provided by a different, big city, experience. In other situations (Case 2), the motivation for outshopping is some dissatisfaction with the retail offerings in the community where the shopper resides. Finally, outshopping can be a general pattern for many product types (Case 3), or for selected products (Case 2).

This article attempts to show why outshopping occurs, to illustrate why it is both a problem and an opportunity, to discuss what steps a smaller community may initiate to reduce outshopping, and to discuss how a larger community may encourage outshopping. An actual case study that describes outshopping from Flagstaff to Phoenix, Arizona is used to illustrate these points.

THE OUTSHOPPING DECISION

The outshopping decision revolves around two key issues: satisfaction or dissatisfaction with the local retail market, and the felt need of the individual or household buyer to temporarily leave the small community. Moveover, these issues are not necessarily independent of each other.

Satisfaction or dissatisfaction with the retail offering in the community in which a person lives will differ,

---

Outshopping or shopping outside of the local retail trade area where one resides is a common occurrence in small cities and towns. However, outshopping can also represent significant opportunities to merchants in both small and large towns.

Robert H. Williams is Associate Professor of Marketing and Associate Dean of the College of Business Administration at Northern Arizona University.

depending on the product type. Other things being equal, people living in larger cities and major retail trade areas, such as Phoenix, will be very satisfied with most product offerings, while people living in smaller communities will be dissatisfied with one or more of the product offerings. Moreover, the amount of satisfaction or dissatisfaction with the retail offerings will vary on an individual basis. Factors such as expectations, actual needs, and what the individual is accustomed to will affect the evaluation of the retail offerings. As an example of differing levels of satisfaction, consider Table 1. Column 2 of this table provides a rough indication of how a broad cross section of 692 Flagstaff, Arizona residents evaluate shopping conditions in Flagstaff.[2] Much diversity exists among product types as well as within a given product.

TABLE 1

SHOPPING CONDITION SATISFACTION SCORES AND AVERAGE PERCENTAGE PURCHASED OUTSIDE OF FLAGSTAFF
(N = 692)

Product Type	*Satisfaction Score*[a]	*Average Percentage of Total Product Purchases Purchased Outside*
Furniture	1.59	34
Women's Formal Wear	1.74	28
Automobiles	1.80	33
Men's Dress Wear	1.89	27
Home Furnishings	1.94	26
Home Entertainment	2.12	25
Women's Everyday Wear	2.14	22
Photo Equipment	2.19	23
Major Appliances	2.19	20
Men's Everyday Wear	2.22	18
Family Footwear	2.23	21
Sporting Goods	2.34	18
Jewelry	2.35	21
Small Appliances	2.38	17
Food and Groceries	2.39	4

[a] Scores are mean values. Scale varied between Very Satisfied coded 4 to Very Disastified coded 1. Scores below 2 indicate overall dissatisfaction.

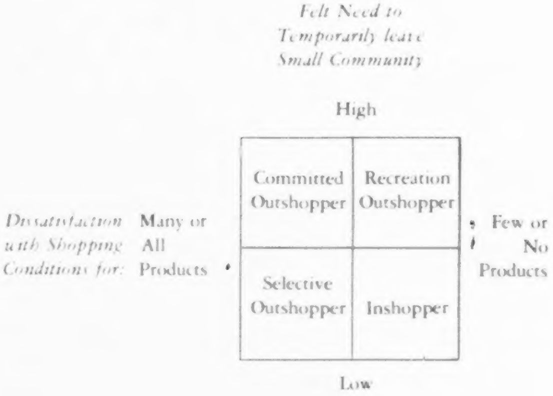
Source: Survey conducted by the author.

The felt need of individuals and households to shop outside the community is an attitude and therefore includes both a direction and an intensity. Some people feel the need to outshop very strongly while others may feel this need only slightly or not at all. Again, the intensity and direction of the felt need is determined by many individual factors. Some of these factors relate to the secondary costs of shopping, such as time and convenience, while others relate to the increased utility or satisfaction of shopping in a different and/or larger community.

One way to portray felt need and satisfaction with local product offerings is shown in Figure I. Four types of outshoppers with four underlying motivations for outshopping can be identified. This figure also begins to clarify the types of outshopping described in the three small cases at the beginning of the article.

FIGURE I

TYPES OF OUTSHOPPERS



Source: Survey conducted by the author.

The *Committed Outshopper* represents the person most likely to outshop. This person is not only dissatisfied with the shopping conditions within the local community but also feels a strong need to go outside the community. One would expect that this type of outshopper would not only make more outshopping trips but would also spend more money outside the community of residence.

Recreation Outshoppers represent individuals and households who are basically satisfied with local shopping conditions but who still feel the need to shop outside the local community. This type of shopper would most likely combine shopping trips with other recreational activity such as eating in restaurants, seeing movies, or visiting the zoo.

Selective Outshoppers are individuals who do not feel a strong psychological need to outshop but nevertheless feel that for economic reasons they must outshop on occasion. Obviously, the secondary costs of outshopping such as lost time and inconvenience, are worth it when the shopper feels that the local market is deficient. This shopper will in all likelihood outshop for specific items.

Finally, the *Inshopper* is an individual who is generally satisfied with the local market and simply does not feel the need to outshop on a regular basis. This type of individual rarely or never outshops.

PROBLEM OR OPPORTUNITY

Outshopping represents a distinct problem for many merchants in numerous smaller communities in Arizona. However, it also represents an opportunity for larger communities. Some indication of the extent of outshopping from Flagstaff, Arizona for example, is shown in column 3 of Table 1, in which the data represent the percent of purchases for various product types made outside of Flagstaff. When one begins to consider the dollar sales volume that goes to Phoenix and other cities in such items as automobiles and furniture, the nature of the outshopping problem for smaller communities becomes more evident.

Nevertheless, outshopping does not have to represent a small community loss and large city win situation because of the concept of comparative advantage. This concept simply means that any economic entity should concentrate on those things that it does best, those things where its superiority relative to another economic entity is greatest. The same concept can be applied to large versus small communities. Each should concentrate on those things that can be performed most efficiently and effectively. For example, low price and an extremely broad and deep product line often require the size and merchandise turnover of large mass merchants surrounded by a large number of potential buyers. These conditions are not usually found in small communities. On the other hand, smaller communities should be able to offer something unique: ease of parking, friendly personnel, social interaction, bucolic and original retail settings. Problems result however, when the larger community is doing evrything better than the smaller one. When this situation arises, outshopping is likely to be a real problem for the smaller community.

A comparison of Flagstaff and Phoenix is shown in Table 2. Flagstaff residents were requested to evaluate Flagstaff and Phoenix on the set of shopping area characteristics shown in the table. Phoenix was rated superior on eight of the nine characteristics and significantly better on seven of the nine. The data tell us that Phoenix does a better job on seven of the nine characteristics and an equal job on the other two. Whatever the comparative advantage of Flagstaff over Phoenix, it is obvious from Table 2 that Flagstaff is either not capitalizing on this advantage or none of the nine attributes listed naturally favor Flagstaff. When such factors as "friendliness of personnel" and "quality and level of customer service" are considered, the latter reason seems unlikely.

TABLE 2

COMPARISON BETWEEN FLAGSTAFF AND PHOENIX ON SHOPPING CHARACTERISTICS

Characteristic	*Flagstaff*[a]	*Phoenix Score*[a]	*Significant Difference*[b]
Accessibility and Shopping Convenience	2.59	2.95	Yes
Selection of Goods	1.96	3.64	Yes
Friendliness of Personnel	2.52	2.43	No
Availability of Professional Services	2.86	3.34	Yes
Quality of Goods	2.50	3.29	Yes
Effectiveness of Advertising	2.37	3.06	Yes
Ease of Parking	2.19	3.05	Yes
Availability of Credit	2.48	2.61	No
Quality and Level of Customer Service	2.11	2.54	Yes

[a] Scores are mean values. The sample size was 385. The higher the score, the more positive the response.

[b] A *T test* between variables (paired samples) along with a significance level of .05 was used to check for differences.

Source: Survey conducted by the author.

REDUCING OUTSHOPPING

What steps can a smaller community undertake to reduce outshopping? There are several. First and perhaps most importantly, responsible entities such as city councils, chambers of commerce, and planning and zoning commissions should give some hard thought to the concept of comparative advantage. Then, development in the small town or community should be guided by these comparative advantages. For example, if the comparative advantage of a particular community is its quaintness (e.g., perhaps Prescott or Sedona), efforts to replace the quaintness with more contemporary designs should not be undertaken. When a small town becomes simply a miniature copy of a larger city, outshopping problems are sure to arise.

A second way that a smaller community can reduce outshopping is through an effective newcomer program.

Whether instituted by a local bank, the chamber of commerce, or by the community itself, the newcomer program can serve not only to welcome new residents but also to speed up the learning process about retail offerings in the local community. The reason for this recommendation is based on the findings of a recent study of Flagstaff shoppers.[3] Satisfaction with Flagstaff retail offerings tended to increase with the number of years lived in the local community. One explanation for this finding is that knowledge of local shopping conditions increases the longer one lives in the community. This results in less dissatisfaction with local shopping conditions and therefore less outshopping. An effective newcomer program can deter outshopping patterns before they get started.

Related to a newcomer program, but slightly different, is the effective use of promotion to inform residents about product offerings. If people are truly aware of what is available in the community, outshopping levels will be reduced. However, the promotion must be effective, it must reach its intended audience, and it must be coordinated where possible. Coordinated means that shopping areas, malls, neighborhoods, and others must work together to inform residents of what is available and where.

ATTRACTING OUTSHOPPERS

If outshopping occurs on a large scale, large-city retailers, selling products for which people normally outshop, may be wise in attempting to direct some of the outshopping business their way. One of the chief means could be through efforts to reduce the real cost of outshopping trips. One example is the free delivery service that some Phoenix furniture retailers provide to Northern Arizona residents. Naturally, this service costs something, but by delivering only when the truck is fully loaded and by delivering at the store's convenience, the cost is minimized. Yet, the benefit to the consumer is amazingly high. Other examples could include a free night's lodging with a minimum purchase, and maintenance or service agreements that encourage the shopper to make trips back to the store of purchase. Finally, efforts to tie outshopping trips with recreation would also be effective. Free tickets for an athletic event or passes to a local attraction are examples of gifts that merchants could use to entice out-of-town residents.

Additional reflections on outshopping would have retailers in both cities realize two things. First, efforts to increase or decrease outshopping will eminently revolve around two types of outshoppers—*recreation outshoppers* and *selective outshoppers*. Efforts by small city retailers to keep *committed outshoppers* in town, or by large city retailers to draw *inshoppers* out of town will be marginally effective. But, recreation outshoppers and selective outshoppers are more likely to respond to selective marketing programs designed for the particular purpose. Second, the concept of comparative advantage should be a guiding force in determining for which retail outlets, and for what product types, marketing programs can be undertaken to either discourage or enourage outshopping.

One other type of outshopping deserves some discussion. In many cases outshopping from a large city to a small one does occur. One of two situations will usually explain this shopping behavior. First, the existence of a unique and specialized retail outlet or series of retail outlets may pull big city shoppers to a small community. A classic example of this type of outshopping is the L. L. Bean store located in Freeport, Maine. The store is open 365 days a year, 24 hours a day and draws shoppers from all over the Northeast and the United States. The product line includes outdoor equipment and clothing. In Arizona, the city of Sedona attracts many nonlocal shoppers. One reason for this is the large number of art galleries featuring southwestern art.

Second, unique recreational events can attract many big city shoppers to smaller communities. Shopping in the local community is frequently one part of the recreational outing. For example, many Phoenix residents would attend the All Indian Pow Wow while it was still being held in Flagstaff. The Sedona St. Patrick's Day Parade draws observers (and shoppers) from all over the state. A small community may be successful in attracting outshoppers by following either or both of these strategies.

Outshopping should not be looked upon as a large city win, small city lose situation. For merchants in both large and small cities outshopping is an opportunity to be dealt with through effective and selective marketing programs.

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[1] A. Coskun Samli and Ernest B. Uhr, "The Outshopping Spectrum: Key for Analyzing Intermarket Leakages," *Journal of Retailing*, 50 (Summer 1974): pp. 70-78, 105.

[2] The data presented in this paper were originally reported in unpublished working paper 81-1, "Outshopping from Flagstaff: A Report of Finding," by Robert H. Williams, April 1, 1981, College of Business Administration, Northern Arizona University, Flagstaff, Arizona 86011. Copies of the working paper are available upon request.

[3] Ibid.

Retired Couple's Budget for the Phoenix Metropolitan Area

ROBERT T. KEIM
SUSAN B. SWIRSLEY

A hypothetical Phoenix area retired couple required $10,848 to maintain a moderate standard of living in 1980. This figure reflects an increase of 8.0 percent over the adjusted 1979 figure for the metropolitan area. The retired couple's budget study was conducted by the Bureau of Business and Economic Research, College of Business Administration at Arizona State University in cooperative cosponsorship with Valley National Bank. The budget, which is based on consumption patterns determined by the United States Bureau of Labor Statistics (BLS), is directly priced during the fourth quarter each year.

The retired couple is described as consisting of a husband, aged 65 or over, and his nonworking wife. The couple is self-supporting and lives as a separate household in the Phoenix metropolitan area. They are assumed to possess an average inventory of clothing and household goods, and are considered to be in reasonably good health with Medicare providing for most of their medical needs. Sixty-five percent of the couples own their home mortgage free, while the remaining 35 percent of the couples rent.

The Phoenix Retired Couple's Budget Study is based on the methodology developed by the Bureau of Labor Statistics and described in Bulletins 1570-4 and 1570-6. The contents of the budget, the item specifications, and allowed quantities of each item were set by the BLS in consumer expenditure surveys that determined which goods and services families were actually purchasing at the time of the survey in 1965. It provided for a lifestyle described as "an intermediate level of living" for a retired couple in the Phoenix metropolitan area. However, since BLS has not changed specifications, the items still reflect 1965 consumption patterns.

It must be emphasized that the budget does not report the average annual expenditure of households, but rather only the amount of income required to purchase a predefined basket of goods held constant over time. This budget study does have considerable consistency; nearly identical goods have been priced each year in the Phoenix metropolitan area. Changes in the year-to-year costs are almost entirely due to changes in

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Transportation showed the largest percentage increase in the Retired Couple's Budget, followed by Other Family Consumption, and Medical Care. The only decrease occurred in the Clothing category.

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prices of the goods and services included rather than to alterations in the budget composition.

Phoenix is not one of the cities on which the Bureau of Labor Statistics keeps retired couples data. Since 1969, the Bureau of Business and Economic Research has utilized the BLS-developed methodology to report the budget figures for a hypothetical Phoenix retired couple at an intermediate level. These data are collected by direct pricing of the specified consumer goods and services. On the other hand, BLS studies for other cities merely update their 1969 direct prices by components of the Consumer Price Index (CPI). Because of this difference in methodology, these figures cannot be accurately compared to those issued by the Bureau of Labor Statistics for other cities.

DETAILED ANALYSIS OF BUDGET COSTS

The largest increase in the 1980 Retired Couple's Budget occurred in Transportation (13.9 percent), Other Family Consumption (10.6 percent), and Medical Care (10.0 percent). All other categories showed increases of less than 10 percent. The only category to decrease in cost was Clothing. Table 1 depicts a comparison of all major categories of the Phoenix area budget for 1979 and 1980.

TABLE 1

METROPOLITAN PHOENIX RETIRED COUPLE'S BUDGET PERCENTAGE CHANGE 1979-1980

	1980	*1979 (Revised)*	*Percentage Change*
Total Budget	$10,848	$10,047	8.0
Total Family Consumption	10,198	9,445	8.0
Food	3,197	2,916	9.6
Housing	3,613	3,409	6.0
Transportation	1,120	983	13.9
Clothing	458	470	-2.6
Personal Care	394	383	2.9
Medical Care	917	833	10.0
Other Family Consumption[a]	499	451	10.6
Other Items[b]	650	602	8.0

Note: Details may not add due to rounding.

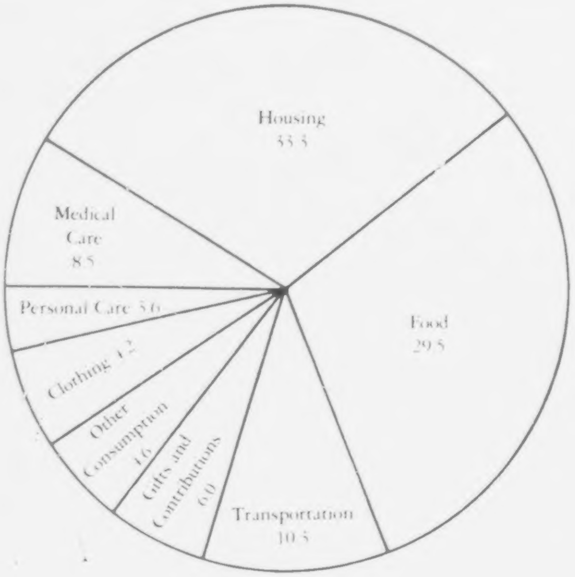
[a] Other family consumption includes reading, recreation, tobacco, alcoholic beverages, and miscellaneous expenses.

[b] Other items include gifts and contributions.

Source: Phoenix data are compiled by the Bureau of Business and Economic Research, College of Business Administration, Arizona State University in cosponsorship with Valley National Bank.

The Housing category is the major component with 33.3 percent of the total budget. As mentioned earlier, the BLS assumes 65 percent of the couples own their home mortgage free, thus their only expenses are utilities, appliances, home insurance, property taxes, and repair costs. Renter costs are comprised of monthly rent for an unfurnished one or two bedroom apartment or single family dwelling, utility costs, kitchen appliances and insurance for household contents.

FIGURE 1
PERCENTAGE DISTRIBUTION OF EXPENDITURES, 1980
(Retired Couple's Budget)



Source: Bureau of Business and Economic Research, College of Business Administration, Arizona State University, in cosponsorship with Valley National Bank.

Average rent, based on a survey of approximately 400 renter dwellings in the Phoenix area, was $279.45. This represents an increase of 6.4 percent over the 1979 average rent. This figure, coupled with other renter costs, leads to an overall 7.8 percent increase.

Homeowner costs increased only 3.8 percent overall. This can be attributed to a decrease in property taxes of

19.3 percent counterbalanced by an increase in utilities of 20.1 percent. The remaining homeowner items, each of less relative importance than the two cited above, combine to make up the total homeowner's increase. Overall in 1980, the hypothetical retired couple paid 6.0 percent more on total housing than the previous year.

The Food category, a significant contributor to the Retired Couple's Budget with 29.5 percent of the total budget allocated to it, increased 9.6 percent. This category can be subdivided into two areas: Food At Home and Food Away From Home. Food At Home, the larger portion of the budget, increased 10.0 percent while Food Away From Home increased 6.8 percent. A moderating factor in food cost increases was a reduction in state sales tax on food items from 4 to 0 percent as of July 1, 1980.

Transportation costs (10.3 percent of the total budget) increased the largest amount in 1980 and were characterized by three substantial increases for the automobile owner: Gasoline prices rose 16.2 percent, tire prices increased 16.9 percent, and public transportation costs showed a 27.3 percent increase. Nonauto-owners, relying primarily on taxis and buses, paid 23.3 percent more for transportation in 1980 as compared to 1979.

The only category showing a decrease in costs was Clothing, a relatively minor portion of the budget with 4.2 percent allocated to it. This decrease can be explained by an 8.6 percent decrease in the price of women's clothing, the category making up the largest portion of the clothing budget, coupled with an unusual number of preholiday clothing sales in the fourth quarter of 1980, the time during which goods were priced.

The comparisons of the 1979 and 1980 distribution of budget expenditures are shown in Table 2. No significant change in the budget allocation was detected.

TABLE 2

METROPOLITAN PHOENIX RETIRED COUPLE'S BUDGET PERCENTAGES OF TOTAL BUDGET AUTUMN, 1980 AND AUTUMN, 1979

	Autumn 1980 Percentage of Total Budget	*Autumn 1979 Percentage of Total Budget*
Total Budget	100.0	100.0
Total Family Consumption	94.0	94.0
Food	29.5	29.0
Housing	33.3	33.9
Transportation	10.3	9.8
Clothing	4.2	4.7
Personal Care	3.6	3.8
Medical Care	8.5	8.3
Other Family Consumption[a]	4.6	4.5
Other Items[b]	6.0	6.0

[a] Other family consumption includes reading, recreation, tobacco, alcoholic beverages, and miscellaneous expenses.

[b] Other items include gifts and contributions.

Source: Phoenix data are compiled by the Bureau of Business and Economic Research, College of Business Administration, Arizona State University in cosponsorship with Valley National Bank.

SUMMARY AND FORECAST

The total budget increase in the 1980 Retired Couple's Budget for the Phoenix metropolitan area was 8.0 percent, a drop from the 1979 increase of 10.4 percent. This increase is considerably less than that measured by the Metropolitan Phoenix Consumer Price Index for the same time period, largely because of the assumption that the retired couple's home is mortgage free. Given current predictions for the inflation rate in 1981, most items of the Retired Couple's Budget will likely increase in cost at approximately the same rate in 1981 as in 1980.

The Arizona Business Scene

1912

The Standard of Living: Observations and Comparisons

While the "cost of living" is a common indicator of the economy of an area, the "standard of living" is a more accurate economic indicator.[1] Determining the standard of living in an area involves first computing the cost of living, and then comparing that with the prevailing wage and salary levels. For example, a city with a high cost of living, but correspondingly high wages and salaries may have a better standard of living than a city with a low cost of living but also comparatively low wages.

This article examines the wage and salary levels prevailing in metropolitan areas across the United States as part of the process in determining the standard of living. A summary of several wage measures is included in Table 1. All of the first five measures directly compare wages of certain job types from city to city, but each is limited in that only a small number of job types are analyzed. In particular, most of the job types surveyed are "blue collar" and clerical positions, while administrative and engineering positions, for example, are generally not included. The sixth measure shown in Table 1, annual average pay, does include nearly all job types, but does not directly compare the wages of a given job type from city to city. Instead, it compares the average pay of all job types from city to city. As such, it is a measure not only of the wages paid per job type, but also a measure of the number of people working in each job type.

The varied index values for a given city in Table 1 are an indication of the varied job types being surveyed. In any given city, wages for certain types of jobs may be relatively high, while wages for other types of jobs may be relatively low. Thus, it is necessary to look at several measures to get an accurate overall picture of wage and salary levels prevailing in a given city.

An average of the various measures presented in Table 1 reveals a distinct geographic pattern in wage levels, though the pattern is different than it is for cost of living. The highest wages occur along the West Coast (California, Oregon, Washington), followed by the Mideast region (Ohio, Michigan, Kentucky, Indiana, Illinois, Wisconsin). Wages are lowest in the South (Tennessee, North and South Carolina, Georgia, Alabama, Mississippi, Florida), the South Central states (Texas, Oklahoma, Arkansas, Louisiana), and Mountain states (Montana, Idaho, Wyoming, Utah, Colorado, Nevada, New Mexico, Arizona). The other areas of the country have wage levels slightly above the national average.

In Arizona, the wage and salary levels are somewhat below the national average: the average index for Phoenix is 95, for Tucson 93. Particularly in Tucson,

TABLE 1

WAGE INDEXES FOR SELECTED MAJOR CITIES

(National Average = 100)

City	*Union Wage Rates*[1]	*BLS Pay Indexes*[2]	*Job Bank Offers*[3]	*Occupational Earnings*[4]	*Production Hourly Earnings*[5]	*Average Annual Pay*[6]
Albuquerque	88	—	—	—	78	93
Anchorage	151	—	—	—	—	160
Atlanta	88	97	—	94	88	101
Baltimore	87	98	—	—	101	98
Birmingham	87	—	92	—	—	101
Boston	97	98	—	—	90	100
Buffalo	101	102	—	—	118	101
Chicago	104	108	107	104	97	113
Cincinnati	107	98	—	—	—	106
Cleveland	108	106	—	—	109	113
Columbus	101	—	—	—	—	100
Dallas-Ft. Worth	90	89	104	—	86	103
Denver	94	98	84	—	93	105
Detroit	106	119	—	—	129	131
El Paso	71	—	—	—	—	81
Honolulu	95	—	—	—	92	91
Houston	98	94	—	97	108	119
Indianapolis	100	101	—	—	107	104
Kansas City	106	103	—	—	—	104
Los Angeles	111	104	—	—	94	112
Louisville	93	—	—	—	107	99
Miami	90	—	96	—	68	97
Milwaukee	100	103	—	—	113	107
Minneapolis-St. Paul	94	102	—	—	103	104
Nashville	84	—	—	86	—	91
New Orleans	90	—	—	—	98	99
New York	99	105	—	102	82	118
Philadelphia	95	100	99	—	97	104
PHOENIX	101	—	97	87	92	97
Pittsburgh	102	102	—	—	115	111
Portland	113	—	—	107	108	106
Sacramento	120	—	—	—	108	106
St. Louis	99	100	—	—	105	105
Salt Lake City	95	—	—	—	—	95
San Diego	114	99	106	103	94	97
San Francisco	123	118	—	113	118	116
Seattle	116	111	—	—	122	117
Stamford	93	—	—	—	—	114
TUCSON	—	—	95	93	93	92
Washington, D.C.	96	97	—	97	108	115

Sources:

[1] Union wage rates at April 1, 1981: U.S. Department of Labor, published in *Current Wage Developments,* June, 1981.

[2] Pay indexes of clerical, unskilled plant, skilled maintenance, and electronic data processing positions: calculated by the Bureau of Labor Statistics, published in *Monthly Labor Review*, November, 1979.

[3] Job service wage offers for new job openings in Fall, 1980: calculated from information compiled by the Arizona Department of Economic Security, published in *How Does Arizona Compare?*

[4] Comparative average hourly wage rates for selected positions in 1979: calculated from information compiled by the Arizona Department of Economic Security, published in *How Does Arizona Compare?*

[5] Average hourly earnings of production workers on manufacturing payrolls in July, 1980: Bureau of Labor Statistics, *Employment and Earnings*.

[6] Average annual pay of workers covered by State and Federal unemployment insurance programs in 1979, published in *U.S. Department of Labor News*.

there is considerable consistency between the various measures. Wages in Arizona are about the average for the Mountain region, and lower than in Southern California.

The final step in determining the standard of living is to compare these wage levels to the cost of living. Table 2 shows a standard of living index that is calculated as the ratio of the average wage index derived from Table 1 to the average cost of living index, calculated from the cost of living that appeared in the June/July issue of *Arizona Business*. The larger the index shown in Table 2, the better the standard of living.

TABLE 2

STANDARD OF LIVING INDEX

(National Average = 100)

Albuquerque	88
Anchorage	122
Atlanta	101
Baltimore	93
Birmingham	100
Boston	85
Buffalo	103
Chicago	101
Cincinnati	107
Cleveland	108
Columbus	105
Dallas-Ft Worth	98
Denver	98
Detroit	117
El Paso	78
Honolulu	77
Houston	106
Indianapolis	104
Kansas City	106
Los Angeles	100
Louisville	106
Miami	87
Milwaukee	102
Minneapolis-St Paul	97
Nashville	89
New Orleans	102
New York	83
Philadelphia	96
PHOENIX	99
Pittsburgh	110
Portland	103
Sacramento	105
St Louis	107
Salt Lake City	97
San Diego	96
San Francisco	102
Seattle	121
Stamford	88
TUCSON	96
Washington, D.C	94

Source: Calculated as the ratio of the average wage index to the average cost of living index in each city, as compiled by the author

Caution in interpreting this information is recommended; a difference of roughly three or fewer index points between cities is probably not significant.

As with both the cost of living and wage levels, a definite geographic pattern is shown in the standard of living. The highest living standards exist in the Mideast region and along the West Coast, followed by the North Central states (Kansas, Missouri, Minnesota, Iowa, Nebraska). All other regions of the country have a standard of living below the national average, with little variation between regions. Individual cities may be exceptions to these general regional findings, as in the case of San Diego, which has a standard of living index below 100.

Thus, although the West Coast has the highest cost of living in the nation, its wages and salaries more than compensate for these high costs, allowing the West Coast to have the highest standard of living. In contrast, the Northeast (New York and New England) has living costs approximately the same as the West Coast, but a standard of living below the national average due to relatively low wages and salaries.

In Arizona, Phoenix has a standard of living index of 99, slightly higher than that of other cities in the Mountain region (and roughly equivalent to Los Angeles and San Diego). Tucson's index of 96 may be misleading since it was based on limited cost of living information. In actuality the standards of living in Tucson and Phoenix are probably comparable. In general, wages and the cost of living are very closely matched in Arizona, resulting in a standard of living near the national average.

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[1] See the June-July issue of *Arizona Business* for a detailed discussion of the cost of living

A Survey of Arizona Business Conditions

HAROLD FEARON

The Arizona economy limped through September, according to results from the monthly business survey of the Purchasing Management Association of Arizona and the Purchasing Management Association of Southern Arizona. Decreases were recorded on the indicators of inventory levels, new orders received, and employment, while the delivery time and production indicators showed only very small increases. The good news is that prices paid recorded its smallest increase in almost five years.

The purchasing business survey is in its twentieth year of consecutive monthly reporting on the current status of the Arizona economy. Data are gathered through a questionnaire sent at the close of each month to purchasing managers throughout the state, asking them to indicate the direction of activity—higher, unchanged, or lower—on six key indicators of economic activity in the month just ended. Since these purchasing managers deal daily with the forces of supply and demand, they are able to provide timely and accurate information on current business trends, which enables economic turning points to be spotted.

Prices paid for major purchased items went up, but at a lower rate than in August and at the lowest rate since November of 1976. The survey indicated that 42 percent of the purchasing managers paid higher prices in September; a larger 51 percent saw prices unchanged; while 7 percent said they paid lower prices in September than in August. The overall price increase rate has been following a downward trend, beginning last February, and the rates of upward price hikes have been consistently well under those during the very high inflation period of 1978 to the end of 1980. Upward price pressures definitely are abating, and while inflation has not been knocked out, it is definitely down and likely will remain relatively low in the months immediately ahead.

Delivery time on shipments from vendors continued to stretch out, but at a very low rate, which has been the case in each month this year. Longer delivery times were reported by 21 percent of the purchasing managers, compared to the 15 percent who received faster service from their suppliers. This is another sign of less-than-vigorous growth in the Arizona economy.

Inventory levels of purchased materials decreased again in September, for the seventh consecutive month. The decrease occurred in reaction to the lower new order and production rates plus uncertainty about the future and the duration of time before sustained economic growth begins again. Although 26 percent of the firms added to inventory, a much larger 41 percent cut stocks, a reflection of the slowing Arizona economy. Nevertheless, it is a positive sign in the sense that Arizona firms have been able to reduce stocks gradually,

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thus avoiding the threat of massive, forced inventory reductions, which would have resulted in a classic inventory-reduction recession.

New orders received from customers declined slightly in September for the second month in a row. Orders of 33 percent of the firms increased, but 36 percent said they booked less new business in September than in August. Performance on this indicator has been weak all through 1981, with only marginal increases or decreases shown in each of the months.

Production went up slightly in September, following decreases in both July and August. Production was raised in 35 percent of the firms; 30 percent lowered output. As with the new order indicator, production has not exhibited any real strength except in March of this year.

Employment of Arizona firms declined for the fourth consecutive month and the fifth month out of the eight months so far this year. Yet, the decrease in September was smaller than in August, and none of the monthly decreases has been large. Twenty percent of the firms added to their workforce, but 27 percent pared payrolls. This cutback is a reflection of the flagging new order and production rates.

In summary, the Arizona economy slipped sideways in September and seems to be drifting, with little wind in its sails. The incoming order rate is in the doldrums, and production and employment are stalled. Both August and September were weak months, and there is little on the horizon pointing to any sharp turnaround before the end of the year. However, the price picture is encouraging, as price increases continue to moderate, setting the stage for more stable and sustainable growth during 1982.

The results of the September purchasing survey are shown in Table 1.

TABLE 1

SEPTEMBER PURCHASING SURVEY

	Percent of Purchasing Managers Indicating Each Response (September compared to August)		
Key Indicators	*Higher*	*Same*	*Lower*
Prices paid for major commodities	42	51	7
Delivery time from vendors	21	64	15
Purchased materials inventory level	26	33	41
New orders received	33	31	36
Production	35	35	30
Employment	20	53	27

Source: Purchasing Management Association of Arizona and Purchasing Management Association of Southern Arizona

ARIZONA SALES OF ELECTRICAL POWER

	August 1981	*August 1980*	*One Year Percentage Change*	*August 1981*	*July 1981*	*One Month Percentage Change*
Sales of Kilowatt Hours (Thousands)	3689.7	3165.8	16.5%	3689.7	3695.3	-0.2%

Source: Based on reports from major suppliers

Retail Food Prices

SEPTEMBER, 1981

Retail food prices in Maricopa County were unchanged in September, following a 0.3 percent increase in August. The food price survey is compiled by the Bureau of Business and Economic Research, College of Business Administration, at Arizona State University. Cosponsor of the study is Valley National Bank. The September index of 268.0 indicates that shoppers would now have to pay $26.80 for a basket of goods that would have cost $10.00 in 1967. These goods could have been purchased for $24.95 one year ago. The September, 1981, index reflects a 7.4 percent increase over the September, 1980, value.

Gains were noted for *Meats, Poultry, Fish, and Eggs* (0.8 percent), *Cereals and Bakery Products* (0.7 percent), and *Dairy Products* (0.4 percent). These increases, however, were neutralized by declines for *Other Foods* (-0.6 percent) and *Fruits and Vegetables* (-1.2 percent).

Higher egg prices (9.7 percent) contributed to the 0.8 percent increase for *Meats, Poultry, Fish, and Eggs*. Other advances were posted for pork items, notably noncanned ham (8.5 percent), miscellaneous pork items (6.9 percent), and sausage (5.9 percent). Partially offsetting these gains were lower poultry prices. The miscellaneous poultry category fell 8.4 percent, followed by fresh/frozen chicken parts (-6.0 percent) and fresh whole chicken (-5.5 percent).

Price changes were moderate for both the *Cereals and Bakery Products* and *Dairy Products* subgroups this month. Sweet rolls, coffee cake, and doughnuts rose 3.5 percent, followed by fresh cake and cupcakes (3.1 percent) and cookies (1.7 percent). These gains were only slightly offset by reductions for fresh biscuits, rolls, and muffins (-2.0 percent) and flour/prepared flour mixes (-0.7 percent). The only notable price change in *Dairy Products* was a 6.2 percent increase for ice cream and related products.

Numerous changes occurred in the *Other Foods* subgroup, resulting in a small decline during September. Frozen prepared food fell 7.3 percent, followed by a 3.9 percent drop in the category of miscellaneous sweets. Decreases were also noted in the category of carbonated beverages excluding nondietary cola (-2.8 percent) and for freeze-dried and instant coffee (-2.2 percent). These declines were partially counteracted by increases for roasted coffee (1.5 percent), nuts, potato chips, and other snacks (1.2 percent), and cola drinks excluding diet cola (1.2 percent).

The 1.2 percent decrease for *Fruits and Vegetables* in September followed a 1.3 percent increase during the previous month. Responsible for the reduction were lower prices for tomatoes (-22.2 percent), apples (-11.8 percent), and miscellaneous fresh vegetables (-8.5 percent). Slightly moderating these lower values were higher prices for oranges (14.5 percent) and lettuce (11.5 percent).

A comparison of August, 1981, Food Consumed at Home for Maricopa County with index values for four selected metropolitan areas reveals that the outlays required to purchase a food group in August, 1981 (obtainable for an outlay of $10.00 at 1967 average prices) were $26.80 in Maricopa County; $27.36 in Los Angeles-Long Beach; $27.54 in San Francisco-Oakland; $26.74 in Chicago-Northwestern Indiana; and averaged $27.28 in the United States.

TABLE 1

INDEX FOR FOOD CONSUMED AT HOME

Maricopa County, United States, and Selected Metropolitan Areas
(Average 1967 = 100 percent)

Group	*Maricopa County Sep. '81*[a]	*Maricopa County Aug. '81*	*United States* Aug. '81*	*Los Angeles Long Beach* Aug. '81*	*San Francisco Oakland* Aug. '81*	*Chicago Northwestern Indiana* Aug. '81*
Food Consumed at Home	268.0	268.0	272.8	273.6	275.4	267.4
Cereals and Bakery Products	259.1	257.2	272.6	286.5	282.6	274.8
Meats, Poultry, Fish, and Eggs	267.3	265.2	255.8	254.2	257.7	256.9
Dairy Products	233.5	232.5	243.8	237.2	236.9	237.8
Fruits and Vegetables	269.0	272.3	286.1	271.5	283.0	281.7
Other Foods Consumed at Home	293.0	294.7	325.1	333.6	339.7	326.0

*Computed from data contained in *The Consumer Price Index*. U.S. Department of Labor, Bureau of Labor Statistics, Washington, D.C.

[a] Maricopa County food prices are reported for the month closest to publication.

[b] Comparisons of food prices among various cities and the United States average are made on the basis of earlier months because of the lag in collecting price reports from these other areas.

Note: Index comparisons between Maricopa County and the other regions show only that food prices in Maricopa County have increased more or less than food prices in the other regions since 1967. The indexes cannot be used to determine the actual differences in food price levels between the regions.

Source: Bureau of Business and Economic Research, College of Business Administration, Arizona State University, in cooperative cosponsorship with Valley National Bank.

Metropolitan Phoenix Consumer Price Index

THIRD QUARTER, 1981

Prices of goods and services in the Phoenix Metropolitan Area rose 2.3 percent during the third quarter of 1981, up slightly from the 1.9 percent rise posted for the second quarter of 1981. The rise in Phoenix area consumer prices is below the increase posted for the United States as a whole (2.8 percent), repeating the pattern of the second quarter, 1981. Phoenix area price increases were also well below those for Los Angeles (2.8 percent) and Chicago (4.3 percent).

Over the preceding one-year period, the percentage change of 10.9 percent for Phoenix was identical to the increase for the nation as a whole and was less than Chicago (12.5 percent) and Los Angeles (11.1 percent).

The Consumer Price Index (CPI) for the Phoenix Metropolitan Area, upon which these inflation measures are based, is prepared by the Bureau of Business and Economic Research, College of Business Administration, Arizona State University. The quarterly CPI is based upon comprehensive surveys undertaken by the Bureau of Business and Economic Research in cooperative cosponsorship with the Valley National Bank.

Food price increases in the third quarter were again quite moderate at 1.7 percent. Food at Home rose 1.9 percent, identical to the national figure and comparable to Chicago (1.8 percent) and Los Angeles (1.6 percent). The local increase was due largely to the category of Meats, Poultry, Fish, and Eggs (3.5 percent). The small increase in Dairy Products (0.2 percent) moderated the gain in Meat, Poultry, Fish, and Eggs. Food Away from Home increased in Phoenix in the third quarter by 1.4 percent. While considerably below the rate for the previous quarter (2.7 percent), this increase was in line with the national increase of 1.5 percent. Chicago and Los Angeles posted quarterly gains of 1.9 percent and 1.0 percent respectively.

The price index for *Housing* increased 3.1 percent in the third quarter, up slightly from the second quarter (2.7 percent). For the first time since the second quarter, 1980, *Housing* was below the national increase (3.9 percent). The quarterly increase for Phoenix is significantly below Chicago (6.7 percent) and slightly lower than the Los Angeles increase (3.4 percent). Primary contributors to the rise in the *Housing* index were Homeownership (3.1 percent) and Fuel and Other Utilities (6.4 percent). The rise in Homeownership costs was due largely to the 8.8 percent increase in Contracted Mortgage Interest Cost, which has increased 44.4 percent during the past year. Home Purchase prices, the other major contributor to Homeownership costs, remained relatively stable with a slight increase of 0.9 percent after a decline of 0.6 percent last quarter. Fuel and Other Utilities rose as a result of increases in utility gas prices (24.9 percent) and interstate telephone toll rates (16.4 percent). The increase in utility gas prices largely offset the previous quarter decrease of 19.9 percent. The category of Gas and Electricity, of which utility gas is a part, posted a low yearly gain of 4.3 percent. Household Furnishings and Operations also contributed to the rise in *Housing* costs, increasing 2.3

percent in the third quarter, led by a 5.2 percent increase in furniture prices.

Apparel and Upkeep prices rose at a quarterly rate of 0.6 percent, which is consistent with the United States as a whole (0.5 percent). Chicago showed an increase of 4.1 percent while Los Angeles recorded a decrease of 1.1 percent. Price decreases in Infantwear, Boys' Apparel and Footwear were offset by increases in Girls' Apparel. The one-year increase of 4.5 percent continues to be the lowest of any major category in the Metropolitan Phoenix CPI.

Transportation costs in the Phoenix area increased in the third quarter by 1.1 percent. This represents the second consecutive quarter of relatively small increases in this category. As in the previous quarter, the increase is less than that for the nation as a whole (2.1 percent), and also remains below the comparison cities of Los Angeles (2.0 percent) and Chicago (2.5 percent). In particular, private transportation increased by only 0.5 percent over the second quarter; gasoline and other petroleum products remained unchanged, as did new car prices. Public Transportation costs increased sharply, up 12.0 percent from last quarter and up 33.2 percent from one year ago. The bulk of this quarter's increase is attributed primarily to higher intracity mass transit fares, although airline and taxi fares also experienced moderate increases.

Medical Care rose 3.1 percent in the Phoenix area, the largest quarterly increase during the past year, up 7.8 percent from one year ago. The increase is due largely to higher hospital and health insurance costs. Physician, dental and other professional services remained unchanged during the third quarter. Price changes during the third quarter were slightly less than those posted by Chicago and the United States as a whole (both 3.6 percent) and considerably below the increase for the Los Angeles area (8.9 percent).

Entertainment costs in the Phoenix area posted a 2.1 percent increase during the third quarter, up from the previous quarter increase of 0.4 percent. Admissions and fees paid for entertainment services increased 6.8 percent, while sporting goods and equipment prices decreased by 5.7 percent. The increase in *Entertainment* costs during the past quarter was larger in Phoenix than it was for the United States (0.9 percent) or Chicago (1.4 percent), but was comparable to Los Angeles (2.2 percent).

The costs of *Other Goods and Services* rose by 1.6 percent, a small decline from the second quarter rate. Most items in this category increased in cost, led by legal, banking and accounting expenses. The change from the previous quarter is nearly identical to the United States increase (1.5 percent), higher than Chicago (1.0 percent) but lower than Los Angeles (3.2 percent).

See page 24 for the complete Consumer Price Index tables for metropolitan Phoenix and comparative cities.

METROPOLITAN PHOENIX CONSUMER PRICE INDEX
THIRD QUARTER, 1981
(1969 = *100*)

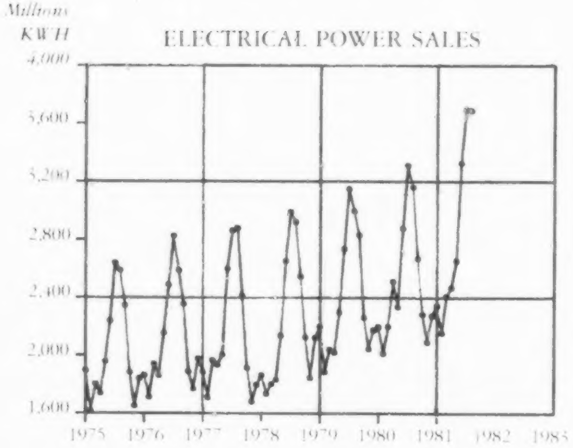
	Second Quarter 1981 Index	*Third Quarter 1981 Index*	*Percentage Change From Last Quarter*	*Percentage Change From One Year Ago*
ALL ITEMS	245.8	251.4	2.3	10.9
Food and Beverages	229.2	233.1	1.7	9.0
Food	234.7	238.8	1.7	9.3
Food at Home	245.0	249.7	1.9	9.2
Cereal and Bakery Products	242.8	247.7	2.0	11.1
Meats, Poultry, Fish, and Eggs	229.1	237.1	3.5	5.5
Dairy Products	220.9	221.5	0.2	9.4
Fruits and Vegetables	258.4	265.8	2.8	17.3
Other Food at Home	271.3	272.4	0.4	7.9
Food Away From Home	213.8	216.7	1.4	9.4
Alcoholic Beverages	158.5	160.4	1.2	4.8
Housing	250.7	258.3	3.1	13.2
Shelter	266.0	273.2	2.7	15.1
Rent, Residential	181.7	183.6	1.0	3.4
Homeownership	283.2	292.1	3.1	18.0
Fuel and Other Utilities	251.8	267.8	6.4	6.2
Household Furnishings and Operations	201.1	205.8	2.3	9.5
Apparel and Upkeep	179.7	180.8	0.6	4.5
Apparel Commodities	168.1	168.3	0.1	2.4
Men's and Boys' Apparel	159.4	158.5	-0.6	5.1
Women's and Girls' Apparel	160.3	162.8	1.5	0.2
Footwear	201.5	196.8	-2.3	3.2
Transportation	265.2	268.1	1.1	10.5
Private Transportation	261.9	263.1	0.5	9.2
Public Transportation	321.2	359.5	12.0	33.2
Medical Care	324.6	334.5	3.1	7.8
Entertainment	206.3	210.7	2.1	11.5
Other Goods and Services	229.2	232.8	1.6	6.6
Personal Care	225.2	229.1	1.7	6.0

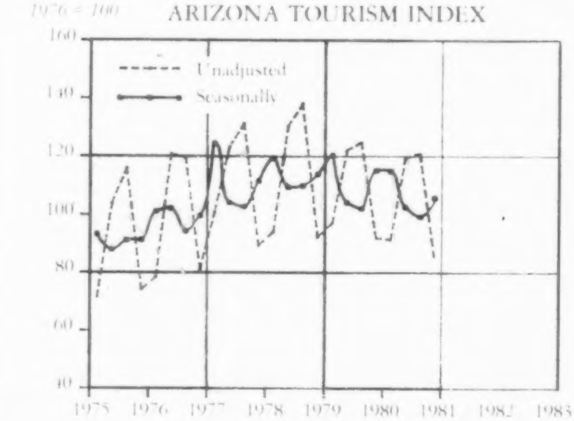
UNITED STATES AND COMPARATIVE CITIES
(1969 = 100)

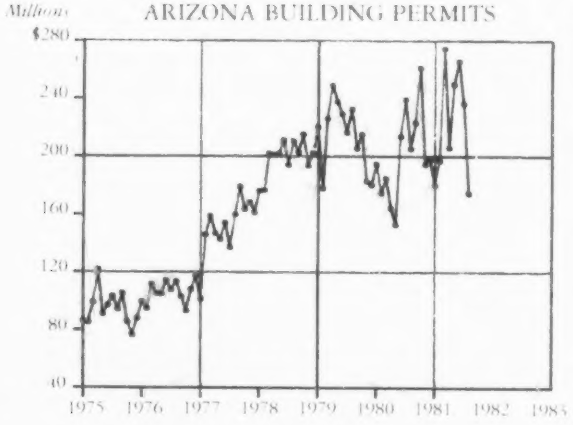
	United States		*Chicago*		*Los Angeles*	
Group	*Percentage Change From Last Quarter*	*Percentage Change From One Year Ago*	*Percentage Change From Last Quarter*	*Percentage Change From One Year Ago*	*Percentage Change From Last Quarter*	*Percentage Change From One Year Ago*
ALL ITEMS	2.8	10.9	4.3	12.5	2.8	11.1
Food	1.8	7.2	1.8	7.8	1.4	7.7
Food at Home	1.9	6.4	1.8	4.9	1.6	7.6
Food Away From Home	1.5	9.0	1.9	5.1	1.0	7.8
Housing	3.9	12.8	6.7	17.2	3.4	12.5
Shelter	4.4	13.7	7.0	19.3	4.0	14.4
Fuel and Utilities	4.1	14.3	10.6	17.2	1.3	2.1
Household Furnishings & Operations	1.3	7.6	-2.1	8.2	1.0	8.7
Apparel and Upkeep	0.5	4.9	4.1	2.9	-1.1	3.6
Transportation	2.1	10.3	2.5	12.8	2.0	11.5
Medical Care	3.6	11.5	3.6	11.1	8.9	16.3
Entertainment	0.9	6.9	1.4	8.7	2.2	0.5
Other Goods and Services	1.5	9.8	1.0	12.0	3.2	11.9

Source: Metropolitan Phoenix data compiled by the Bureau of Business and Economic Research, College of Business Administration, Arizona State University, in cooperative cosponsorship with Valley National Bank; other data from U.S. Department of Labor, Bureau of Labor Statistics, Washington, D. C.

Arizona Economic Indicators


ELECTRICAL POWER SALES


ARIZONA TOURISM INDEX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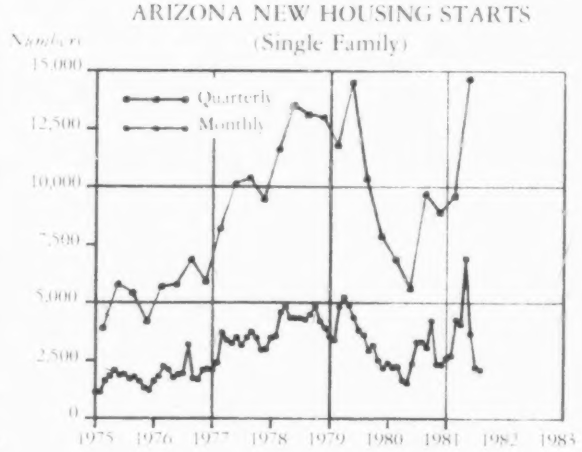
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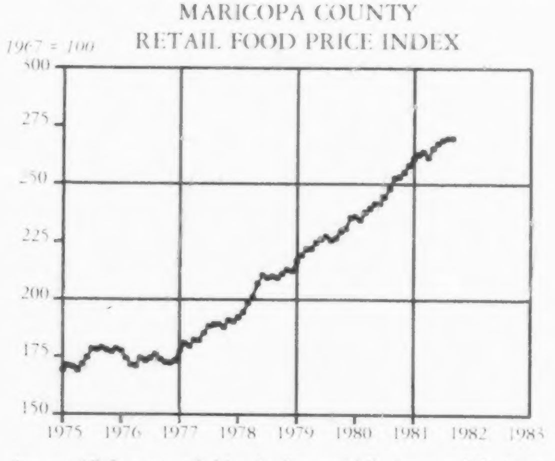
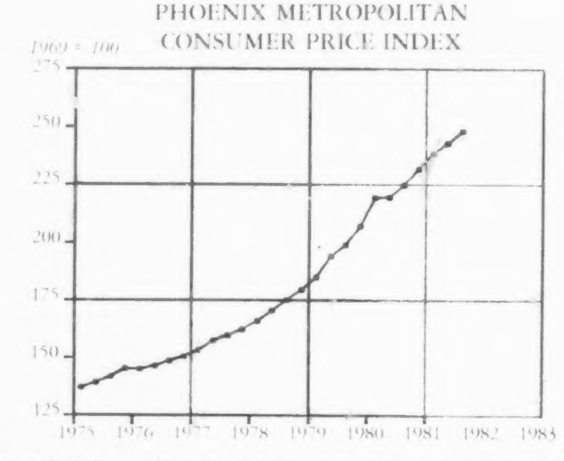

MARICOPA COUNTY RETAIL FOOD PRICE INDEX


PHOENIX METROPOLITAN CONSUMER PRICE INDEX

Source: All data compiled by the Bureau of Business and Economic Research, College of Business Administration, Arizona State University

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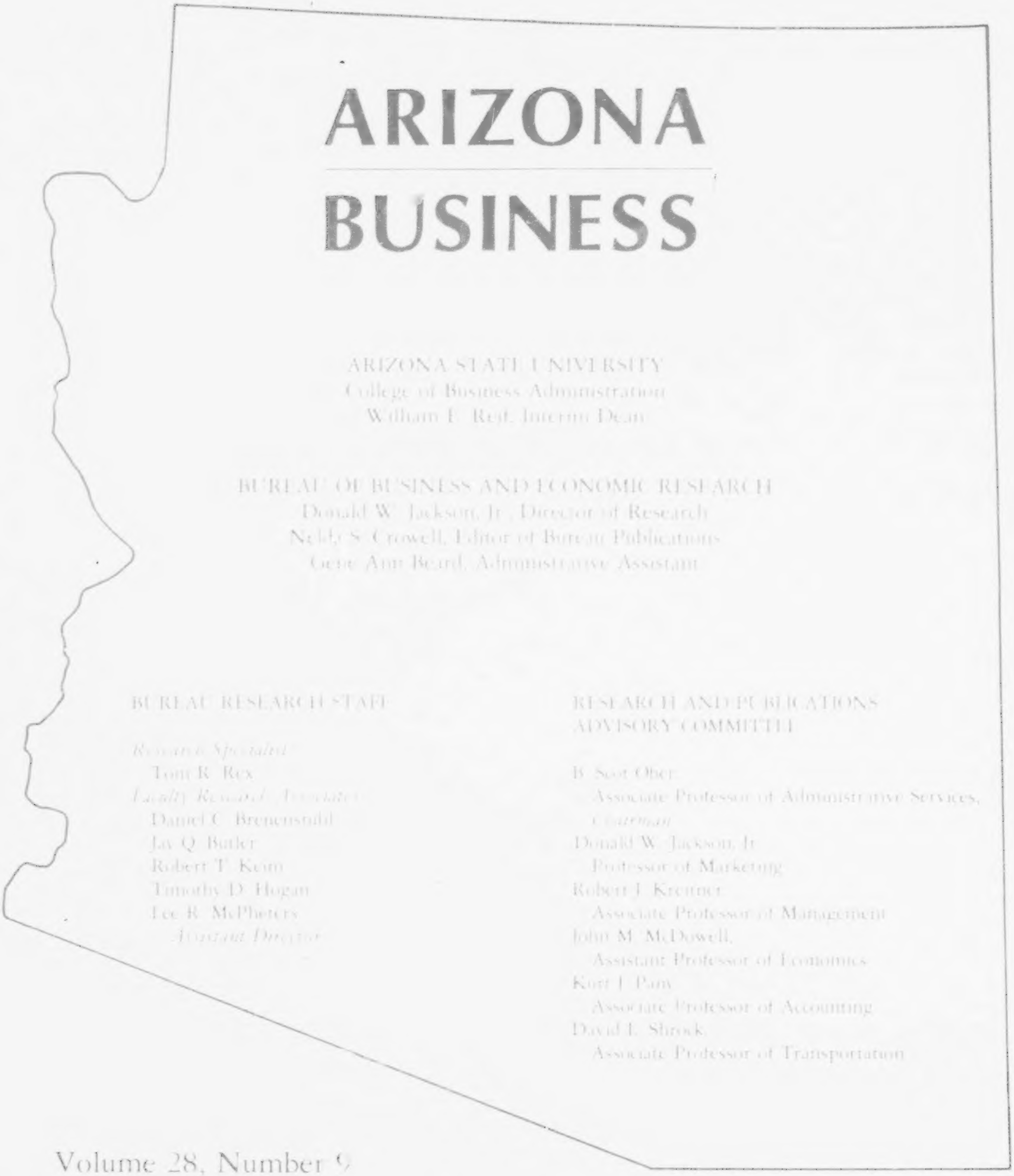

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Report To The Reader

The Bureau of Business Research at West Virginia University recently announced the publication of the 1981 *AUBER Bibliography*. An excellent reference source for anyone interested in the fields of business and economics, the *Bibliography* lists over 2,500 publications such as books, articles, and monographs from 128 college and university research organizations across the United States. Volume XXV includes publications produced during the 1980 calendar year and cites works from institutions of higher education in both the Association for University Business and Economic Research (AUBER) and the American Assembly of Collegiate Schools of Business.

Researchers and other users will find that the *AUBER Bibliography* covers more than 125 subjects, with the largest number of entries in such categories as business and public administration, international business, marketing and advertising, regional economics, personnel management, and financial markets. Owing to increased current interest, small business and entrepreneurship are treated as separate categories for the first time in the 1981 edition.

According to its editors, Stanley J. Kloc and Joan Vannorsdall Schroeder, the 321-page *Bibliography* offers potential users two distinct advantages: a large number of listings, such as working papers, that are not available in more traditional indexes; and an efficient subject classification system which was adapted from the American Economic Association's *Journal of Economic Literature*. In addition to subject categorization, the listings are also arranged by institution and author.

Each year, the newest edition of the *Bibliography* is distributed to colleges and universities across the United States and in twenty foreign countries. In addition, more than 250 business firms and government agencies regularly order copies of the book.

The *AUBER Bibliography: 1980 Publications* is now available from the West Virginia University Bookstore for $12.50 per copy. Limited quantities of the *Bibliography* for previous years are available as well. Once again, past issues are also obtainable in microfilm from Microforms International Marketing Corporation, Elmsford, New York.

Retirement Plans in Arizona: The Manufacturers' View

W. D. HEIER

Virtually all of the information concerning the retirement and pension planning taking place in Arizona is confined to minor comments in the media about the aggregated size of the Arizona Public Employees retirement fund. It is true that the plan's financial statistics are impressive. It is the country's fifty-first largest employee benefit plan in 1981 with a total of approximately $2.1 billion in its various asset accounts. Yet for much of the public, those facts comprise the total knowledge about retirement and pension planning in Arizona.

Therefore, the purpose of this article is to look at a selected segment of Arizona industry to see how retirement/pension planning is progressing in order to add to the public's knowledge of such activities. For purposes of this article, the term "retirement" encompasses both retirement and pension planning.

THE SAMPLE

In order to examine the current situation, a study was conducted among Arizona firms. As indicated by the title of this article, only one segment of the retirement planning in Arizona was selected for study, although three possible areas might have been analyzed. First, it would have been possible to investigate public employee retirement planning, which could have included state, county, and municipal programs. Secondly, the study could have been directed toward the extremely diversified service industry. Lastly, an analysis of retirement planning among Arizona manufacturing organizations appeared to be a fertile area for investigation.

Because there is considerable sameness among large public plans, it was determined that either the service or manufacturing segments should be researched. The service area was not selected for study because it has many small firms that do not have a formal retirement plan for their employees and because the entire field is too operationally and structurally diverse for meaningful retirement planning data.

The area selected was manufacturing, a sector composed of many large and medium-sized Arizona corporations plus a representation of large national firms. With product manufacture as the binding element, enough structural uniformity exists among the companies to eliminate organizational variations as an element in the retirement planning questionnaire.

The *1980 Directory of Arizona Manufacturers*, published by the Phoenix Metropolitan Chamber of Commerce, was used to select the survey participants. A pretest of the survey instrument was conducted among companies having approximately fifty employees. This adequately tested the clarity of the questionnaire and

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Manufacturing firms in Arizona were surveyed about their retirement and pension planning. This article reports the results of the survey regarding type of plan, the use of investment managers, channels for investment, and other aspects of retirement plans.

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also revealed that only a few companies of that size have a formal retirement plan for their employees. Additional inquiry among companies with approximately seventy-five employees revealed a similar situation. Accordingly, in order to acquire data about companies that do engage in employee retirement planning, the sample was limited to corporations having 100 or more employees.

The two-page questionnaire was mailed to the 211 Arizona manufacturing companies listed as having 100 or more employees. Eighty-seven managers completed and returned the survey instrument. This 41 percent response, which is considered high for a mail questionnaire, may have been the result of the fact that, with the Social Security system's future being somewhat unclear, individual and company retirement plans are assuming greater visibility and importance. Whatever the reason, the 41 percent response did provide a rather clear picture about the retirement planning in the manufacturing sector.

THE QUESTIONNAIRE

The questionnaire had two sections. The first section inquired about the company's retirement planning in general. If the company had no such planning, the survey asked if any plan was being considered. Among the eighty-seven respondents, fifteen did not have a plan, but ten of those indicated interest in developing a retirement system for their employees and three of the ten said they were moving rapidly toward installing such a program.

The second half of the questionnaire was concerned with administrative aspects of the plan: the type of plan, the use of outside and in-house investment managers, and the channels used to invest the participants' money. In addition, questions were asked about the plans' disability benefits, survivor benefits and, whether they had a Social Security offset provision.

TYPES OF PLANS

Four types of plans were noted in the questionnaire responses. These were the defined contributions plan, the defined benefits plan, the employee stock option plan, and the Individual Retirement Account plan. The two most common plans in use by Arizona manufacturing companies are the defined contributions and defined benefits plans.

The defined contributions plan is used when the company decides it can only afford to contribute a certain amount of money annually to an employee's retirement program. Normally, this amount is a fixed percentage of the individual employee's salary. For example, 5 percent of the employee's salary may be contributed with the company contributing a matching 5 percent at retirement. The funds that have been amassed by the employee plus the employer contributions constitute the fund available for the employee's retirement. The additions or deletions from that fund will be the result of administrative costs associated with record-keeping plus any good or bad investment results the plan administrator might accrue on the employee's behalf.

The defined benefits plan guarantees that the employee, upon retirement, will receive a certain percentage of the last five years' average salary—perhaps as much as 75 percent. It is designed to ensure the employee a reasonable lifestyle during retirement. Funding this type of plan can be very costly for the employer since the benefits continue as long as the employee lives. Furthermore, many plans have provisions for survivors as well, which means those costs can continue for a long time.

An employee's stock option plan can be tailored in several ways. One such program permits the employee to purchase company stock. For example, the company may make stock available only in years when the operations have been profitable. Sometimes the stock may be offered at an advantageous price. Whatever the conditions or form of the plan, it is designed to retain and motivate the good employee with a rather modest outlay of company resources.

The individual retirement account (IRA) permits the employee who works for a company that has no retirement plan to establish and fund his or her own retirement program. While the company contributes no funds directly to the plan, it is not unusual for the company to believe it really does contribute by paying above average salaries to its employees.

SURVEY RESULTS

As noted previously, among the 87 responses, 15 had no formal retirement plan. Thus, 72 respondents (82.7 percent) had a retirement plan of some type. When asked if the company's plan was administered by a full-time director, 46 said "yes" (63.9 percent), 23 said "no" (31.9 percent), and 3 respondents did not know. The three respondents who did not know whether their retirement plan had a full-time director, were managers of Arizona plants of a national manufacturing firm. A perusal of similar organizations in the survey showed most of that type of organization's retirement planning was administered by a full-time director.

With respect to the 124 nonrespondents, 45 of the firms employed 100-149 people; 54 had 150-499 employees; 17 had an Arizona payroll of more than 500; and 8 surveys were returned as no longer in business. It may be that a number of the nonresponding firms with fewer than 499 employees simply had no retirement plans and did not wish to take time to respond. A brief telephone follow-up among those 17 employers with over 500 employees revealed that 4 had no retirement plan and the remaining 13 that did have such programs chose not to participate in the survey.

Questions concerning the composition of the board of trustees revealed some clear trends. The most prevalent number of members on the board of trustees among the 87 respondents was five (27.7 percent); six members per board (22.2 percent) was the next most common number. Eight companies stated they had no board of trustees—presumably the plan was run entirely by the professional director—and only one plan had as many as nine members. Responses showed that only three plans had union members on the board of trustees. One plan had two members on its board and two plans had one member each. Lacking the actual number of responding organizations that have unions present in the company, no inference can be made. However, when only three of the sixty-two companies with plans have union representation on the board of trustees, one might assume such representation is not great.

The question as to which plan form was the most common was answered overwhelmingly in favor of the defined benefits plan with over 88 percent (see Table 1). Some companies, however, have both a defined contributions and a defined benefits plan for their employees.

Over 93 percent of the respondents said their plans used outside investment managers (see Table 2). This is not surprising since the Employees Retirement Income Security Act (ERISA) approves outside investment managers as a way trustees and full-time professional managers can avoid direct fiduciary responsibility for poor investment results. Questions were asked to determine the type of management used by outside investment managers. Table 2 shows that 65 percent of the respondents had funds managed by "active managers," which was defined as brokerage firms. Only 5.9 percent had funds invested through "passive management," defined as using an index fund, while 14.9 percent used insurance companies, and 8.9 percent used a master trust custodial type program to coordinate

TABLE 1

COMPANIES PARTICIPATING IN VARIOUS TYPES OF RETIREMENT PLANS

	Number[a] of companies
Defined Benefits	69
Defined Contributions	9
Employee Stock Option and IRAs[b]	5
Did Not Know	3

[a] The total numbers of plans listed here exceed the total number of positive responses received (72) because some companies have more than one type of plan for their employees.

[b] The five companies shown as using Employee Stock Option Plans and IRAs (Individual Retirement Accounts) were among the fifteen companies responding that they had no *formal* retirement plan for their employees.

Source: Survey developed by the author.

TABLE 2

COMPANIES USING OUTSIDE INVESTMENT MANAGERS AND PRIMARY INVESTMENT MEDIA[a] USED

(Number and Percentage of Firms Surveyed)

	Yes		*No*		*Don't Know*	
	Number	Percentage	Number	Percentage	Number	Percentage
Companies using outside investment managers	67	93.1	2	2.8	3	4.1
Companies using "active managers" (brokerage firms)	47	65.3	11	15.3	14	19.4
Companies using "passive managers" (index funds)	4	5.9	19	28.3	44	65.7
Companies using insurance companies	10	14.9	20	29.8	37	55.2
Companies using a Master Trust Agreement (bank trust department)[b]	6	8.9	10	14.9	51	76.1

[a] A number of companies reported the simultaneous use of several of the above investment channels. While the aggregate numbers of such multiple investment channels was not recorded, Table 4 does depict the types of investments being made as of the end of 1980.

[b] A Master Trust Agreement is not, per se, a funds investment outlet. It is, more properly, a Custodial Accounting Program that reports to the Plan the results of the investment activities of the funds' investment managers. However, for purposes of the research, it was considered desirable to ascertain whether the companies being surveyed utilized a Master Trust Agreement as the *primary* investment control media.

Source: Survey developed by the author.

the investments. These latter three areas—index funds, insurance companies, and bank trust department investments programs—are worthy of special note.

The index fund concept has two basic assumptions: The first is that an index, such as the Standard and Poor's Index of 500 Stocks, represents the total market. In other words, "index-funders" believe that the S & P 500's movements mirror the actual movements of the total New York Stock Exchange (NYSE) market. Second, is the assumption that if a company weights the various stocks in S & P 500 accurately and invests the correct amount of money in each of those stocks, then the return will be the same as if the company had invested in every one of the NYSE's stocks. This scenario has some variations—i.e., there are "stripped-down" indexes with fewer stocks in them but in general terms, this is the basic concept.

Operationally, the investment company or bank establishes a pool of the S & P 500 stocks and the client company simply buys "units" of that pool. Stock ownership remains with the pool, which makes for easy entrance and exit by a client company having retirement funds to invest. One of the most attractive features of an index fund is its cost. Depending on the amount being invested, the total costs of participating in the pool might be as low as .01 percent of the plan's total investment. Considering this factor, plus the fact there are no commissions to be paid to an investment manager repositioning stocks in a client's portfolio, the index fund is an economical way for a retirement fund to be in the stock market. The expectation is that the index fund will give the retirement plan whatever the total market does—either up or down.

The survey showed that only a small percentage (5.9 percent) of the respondents invested in an index fund. This might be attributed to a number of factors, one of which is the lack of knowledge among Arizona manufacturers about the concept and operations of an index fund. The three major index fund managers today are Wells Fargo Bank, American National Bank of Chicago, and Batterymarch Financial Management of Boston, none of which actively market their index funds in Arizona. This may be the reason that 65.7 percent of the respondents stated they did not know whether their retirement plan funds were indexed. While indexing still appears to be a growing area of national interest among investment professionals, Arizona companies are not likely to invest much in this investment vehicle until it is aggressively marketed in our state.

The Table 2 data are somewhat misleading in showing that only 14.9 percent of the responding companies used insurance companies as their primary investment vehicle. While the data array shows insurance companies are a distant second to brokerage firms, this is not the entire story in terms of the retirement plan dollars invested in insurance company contracts. This is considered at greater length in the discussion of Table 3.

The use of a master trust custodial accounting program vehicle suffers, to some extent at least, from the same problems that beset the index funds; perhaps knowledge about such agreements is lacking. Only 8.9 percent of the responding companies used this investment outlet.

One additional item noted in this section of the questionnaire asked whether any of the plans' funds were invested by in-house, plan employees. Only 16.7 percent said there was some in-house investing; 38.9 percent said there was none, and 44.4 percent said they did not know.

In a number of the investment seminars held by the International Foundation of Employee Benefit Plans, speakers have stated that after a retirement plan reaches a certain asset size, that plan should consider doing some of its funds-investing with its own managers. One reason is that the cost of in-house investing can be significantly less than fees charged by an outside investment broker. Second, and of greater importance, is that an in-house investment manager can be concerned solely with the in-house invested funds—not with running the investment portfolios of a number of retirement plans and businesses. This individual attention to the specific plan's investments plus the minimal-cost, high-response flexibility to change investments make in-house a valid consideration for plans that have sufficient assets to make hiring an in-house investment manager economically feasible.

Although no hard data have been presented to validate the precise size a retirement plan should be before in-house investing is begun, general thinking suggests that a plan should be at least $100 million before any serious in-house investing is attempted. Such a guideline does not preclude a smaller fund, with in-house investing expertise, to do a limited amount of its own cash, or near-cash, investing. Certainly, a $50 million fund, which has determined that economic conditions mandate the investing of some of its funds in U.S. Treasury bills and/or commercial paper, has little need for outside assistance in doing that job. Of course, the task of monitoring economic changes and moving those near-cash funds to a more productive investment is then the responsibility of the fund's trustees.

Smaller funds may find themselves in a tight corner. Anyone can invest money in near-cash instruments, but the fiduciary responsibility for doing so, and reinvesting the funds as market conditions change, can only be discharged by having outside financial entities invest those funds. If such money is to be controlled in-house, then the plan's trustees must be prepared, if sued by a plan participant, to prove that the in-house investment manager is fully qualified to make and execute all the investment decisions regarding those funds. Since qualified investment managers can command high salaries, few small funds can afford to have such an expert on staff. Retirement plans investing with less than a legally defensible investment expert do so at their own risk.

Table 3 reflects the percentage of the total funds invested in four types of investments: common and preferred stocks, bonds, insurance contracts, and real estate. As of December 31, 1980, 52 percent of the total invested funds were in stocks and 18.2 percent in bonds. The interesting factor here is that 26.2 percent of the total funds invested were in Guaranteed Insurance Contracts (GICs). Since only 14.9 percent of the sample stated they used insurance companies as their primary investment media (see Table 2), it is apparent that some rather large amounts of funds are being invested in insurance contracts. Many of those—especially where larger amounts of money are involved—have maturity dates of five years or more on existing contracts. Therefore, it is likely that those contracts were in force before the recent gyrations in inflation and interest rates. It will be interesting to see if the GICs retain their attractiveness, using a fixed-rate formula, over the next few years.

The coming retirement funds market may well be real estate. There still appears to be a growing interest among retirement fund managers in both domestic and foreign properties. Pension and investment newspapers, magazines, and seminars frequently schedule real estate investing as a major topic area for discussion. From the retirement plan's point of view, this may well be an investment from which excellent returns can be achieved. However, it is also an investment area that should be approached very cautiously and researched thoroughly with the assistance of an experienced real estate consultant before any of the plan's funds are committed.

TABLE 3

TYPES OF INVESTMENTS FOR RETIREMENT FUNDS[a]

(Percentage of Firms Surveyed)

	Percentage
Common and preferred	52.0
Bonds	18.2
Guaranteed insurance contracts	26.2
Real estate	3.6

[a] In this table, all stocks (and bonds) were lumped together whether they were actively managed (brokerage firms) or passively managed (Index Funds). In addition, similar treatment was given to the Master Trust Agreement investments where such data could be obtained.

Source: Survey developed by the author.

In the area of specific benefits, the respondents were asked whether their plan had disability provisions. Some 73.6 percent answered that their plan did have disability benefits; 23.7 percent said their plan did not; and 2.7 percent said they did not know. Since the specific disability benefits encompassed a wide variety of technical provisions, no attempt will be made to enumerate them here. An even greater proportion of the plans surveyed (88.9 percent) provided for survivors' benefits. Only 8.4 percent said their plans had no survivor provisions, and the same 2.7 percent noted above said they were not sure what their plans had.

Among the sixty-nine respondents who had a defined benefits plan, forty-seven (68.1 percent) had a Social Security offset, a concept that is explained as follows: First, assume that a company wants to provide its retiring employee with a modestly comfortable, post-work lifestyle, and that the company finds that a retirement income equal to 75 percent of the employee's final average annual salary will meet that goal. That "final average annual salary" figure may be determined in several ways: by obtaining the average of the employee's annual salaries during the last five years of work, by averaging the employee's highest consecutive three year salary, or by some other actuarial computations used to obtain a base salary for computing the retirement benefit.

Assume, for example, an employee's final average salary was $25,000. Using that figure and applying the factor of 75 percent to the final average salary as the benefit formula, the employee would be entitled to receive annual retirement pay of $18,750. But, if the employee receives $18,750 from the plan to ensure a comfortable, post-work lifestyle, what happens if the employee also receives Social Security benefits? The company may decide that a certain portion of the Social Security benefits should be considered as being part of the 75 percent retirement income. If the employee were receiving $7,200 per year in Social Security benefits and the company's retirement plan called for a 50 percent Social Security offset, then one-half of the $7,200 Social

Security pay, or $3,600, would be considered as an offset against the $18,750 due to the employee under the retirement plan's provisions. Therefore, if the Social Security benefits did not fluctuate with varying economic conditions, the retired employee would receive $15,150 from the company's retirement funds plus the $7,200 from Social Security. It is true that the employee has "lost" $3,600 of his company retirement pay but, from the company's point of view, the employee has a combined retirement income of $22,350 ($15,150 from the company and $7,200 from Social Security), which is $3,600 more than the company had determined the employee needed to live a modestly comfortable, post-work lifestyle during his retirement years.

CONCLUSIONS

Arizona manufacturing companies do appear to be following the national retirement plans trends in plan design, including such special aspects as disability and survivor's protection. However, Arizona companies are less aggressive in the area of specialized investing, such as the use of passively managed funds, real estate, and in-house manager investing.

On the positive side is the high percentage of defined benefits plans among Arizona manufacturers. This speaks well for the desire of those companies to provide a livable retirement lifestyle for their long-time, faithful employees.

One item worthy of particular note was the fact that some of the respondents did not know how or where their retirement funds were being invested. In fairness, this situation may not be entirely the employee's fault. Retirement plans can be confusing in their written provisions, and the investing and actuarial concepts can be even more mystifying. If so, then it would appear to be the employer's task to make the employees aware of what the company is doing to ensure its employees a comfortable, dignified, post-work life. It is certainly one visible symbol of the company's special concern for its workers.

The SEC and Corporate Governance: An Evolving Role for Boards of Directors

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Over the past decade, events such as the collapse of several major firms and the admission by other firms of direct involvement in questionable payments has aroused doubts concerning the adequacy of corporate accountability mechanisms.[1] Those mechanisms are the means devised to protect each of the many groups affected by corporation actions without unduly intruding upon or obstructing firm operations.

The Securities and Exchange Commission (SEC) recently addressed the corporate accountability issue. In late 1977, the commission noted that its continuing interest lay with the fundamental question of how corporations can best be made more responsive to their shareholders and the public at large.[2] Late in 1980, after three years of analysis, the SEC issued its *Staff Report on Corporate Accountability*, in which it appears to have adopted the view that a strong board of directors is the key to improved accountability.[3] To the extent that the board of directors can be made stronger, additional government regulation and new disclosure and audit requirements may not become necessary.

The purpose of this article is to summarize and interpret the SEC's findings that relate most directly to corporate directors. The first consideration in the article is the changing role of directors. Next, the article discusses and analyzes both the current composition of boards of directors and the characteristics necessary for the newly prescribed roles. Finally, the organizational structure of boards is discussed.

Traditionally, the function of the board of directors has been "to manage" the corporation, acting as representatives of the shareholders. The board was not only to make decisions on matters of pervasive impact but also to maintain a close relationship with operations. Top management was to conduct the day-to-day affairs but with ready access to the board as policy issues arose.

As modern commerce has become more complex, the infrequency of board meetings and the limited personal contact and availability of board members have often interfered with this managing function. Accordingly, recognition of a new role seems appropriate. That new role is first that of an active monitor of management and only secondarily as an advisor to management. This view is consistent with recent legislation such as the Foreign Corrupt Practices Act, which legislates a more active monitoring role by the directors of U.S. corporations.

In order for directors to fulfill this new mission, the commission sees a need for basic changes in the

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A recent SEC report emphasizes the role of the board of directors as a monitor of managerial performance. To perform this role effectively, a majority of directors should have no other relationship to the firm.

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composition of boards of directors and the committee structure of boards. The following sections of this article address these matters.

COMPOSITION OF THE BOARD

One of the basic conclusions of the SEC report is that the board must be "an independent force," if it is to be effective in monitoring management. Testimony to the commission suggested that, "a board composed largely of officers subordinate to the chief executive, plus a few outsiders handpicked by him, can hardly be expected to hold the chief executive to a high standard of responsibility if he is otherwise inclined."[4]

Still, an SEC survey of 1,200 proxy statements revealed that the traditional case of chief executive board control may still be the general practice. Table 1 indicates that approximately 64 percent of board members exhibit some special relationship to management that may impair their effectiveness as monitors. Table 1 includes both employee relationships and business relationships that might hinder director independence, such as a director who serves the firm in investment or commercial banking, as a supplier, as a legal advisor, or in certain customer relationships.

TABLE 1

RELATIONSHIPS OF DIRECTORS TO FIRMS

Type of Relationship	*Percentage of Firms Having One or More Directors With Such Relationship*	*Percentage of Directors of Surveyed Firms' Boards With Indicated Relationship Type*
Employee	98.8	55.0
Former employee	29.7	4.5
Relative of executive officer	24.8	4.4
Supplier or customer	20.6	5.7
Creditor	19.8	5.2
Attorney	57.6	7.5
Investment banker	20.1	2.4
Control person	21.5	5.8
Total	—	64.5

Source: SEC survey of 1,200 proxy statements.

While the SEC concedes that "...an individual's capacity to exercise independent judgment is, in the final analysis, a qualitative matter," it has insisted that "... the nature and scope of a director's relationship with the issuer and its management certainly bears upon his independence....[5] A much too casual attitude has been taken toward the possibility of conflicts of interest among directors. Too many companies now have outside counsel on the board, or important suppliers, and customers, or outside consultants of some kind or others who are overly dependent on the good will of management."[6]

Conditions in this regard, however, are improving. SEC research indicates that over the past ten years, the number of truly independent directors has increased significantly. Furthermore, this seems to have been taking place for firms of all sizes.[7]

Nevertheless, further improvement is still possible and advantages such as the following accrue to firms that continue toward greater board independence:

- Outside independent directors can better serve as "windows to the world." Management is often too deeply mired in short-run operational matters to be truly sensitive to changes in expectations and demands developing in the environment.
- Independents can evaluate the performance of management more objectively—a critical director-responsibility in his fiduciary role. Citing Dean Yavitz, of Columbia, "a subordinate to the chief executive officer who works for him has to be a saint or a fool to treat him severely ..."
- Independent directors can bring new talents to the firm outside and beyond those of the current management team.
- An independent board may be able to *prevent* illegal transactions and inefficiency. They will be able to ask tough questions (without fear of reprisal), check management assertions of fact and scrutinize business initiates in advance.[8]

Many of these advantages accrue not only to the board as a whole but also to committees of the board. Nonetheless, some negative arguments also need to be recognized. Foremost among these, is the charge that outsiders are often ignorant of the essentials of the specific business. Insiders, on the other hand, can bring to board meetings intimate firm knowledge of value in making sound decisions. Edgar Griffith of RCA purportedly resigned his post out of frustration with independent board members. He has been emphatic in his views on the time wasted "teaching the business to board members."[9] The SEC staff remains unconvinced that the time is wasted but rather tends to accept this as a cost necessary to improve the responsiveness of U.S. corporate business to their shareholders and the public.

Independence in Whole or in Part?

The commission further addressed the more extreme issue of whether management should be excluded from the board entirely; no recommendations were made with respect to the issue. The argument in favor of management representation on the board is based on the belief that the board benefits from management's detailed knowledge of business operations—a knowledge that an outsider cannot generally obtain due to limited interaction with the firm. Furthermore, it was acknowledged that the interaction of management and board helps outside directors evaluate management competence, a basic board function. Outgoing SEC Chairman Harold M. Williams, however, still does not believe that board membership by management is necessary. To quote former Chairman Williams,

> In my view, members of management, as a matter of board policy, should be present for large parts of the discussion at board meetings, perhaps most of it. They should be involved in factual presentations and even in board deliberations up to the point at which their presence interferes with candor. They should not, however, be part of the decision process of the board.[10]

It will be interesting to see how aggressively the new chairman pursues this line.

Small Firm Expectations

The report also considered the potential problems of smaller firms in affording and attracting capable, independent directors. This matter may be of special interest to smaller Arizona corporations. While average board member fees over the past five years have grown from $8,950 to $12,750, these figures may be misleading as regards the small firms' argument to the extent that the average large-firm fee of $23,000 has a significant inflating effect.[11] Board member fees for small firms, while varying greatly, still appear moderate. Indeed they constitute an exceptionally good buy in the view of one expert who suggests that outside independent directors offer small business a genuine opportunity to obtain much needed guidance and counsel.[12] Furthermore, the benefits for the small enterprise might be relatively greater than for large firms in that, "it is among the smaller companies that abuses or neglect of shareholders' interests are more likely to occur and that some increased stockholder participation in management decisions might actually do some good."[13] Thus, even small firms seem well advised to consider the possibility of outside directors. In making the decision, both the warnings of the SEC and the potential benefit of outsider experience and training need to be considered.

Concerning the availability of directors, the staff cites statistics indicating that invitations to serve on boards are being more readily accepted than in the past. Firms are also encouraged to approach nontraditional sources for new board members.

Nontraditional Sources of Directors

Among the most interesting issues raised here was the issue of constituency board representation. The issue has received increased attention of late with the appointment of Douglas Fraser, President of the United Automobile Workers Union, to the board of Chrysler Corporation. In addition to employee constituents, other groups fitting into the constituency category include minority and consumer groups as well as others. The argument in favor of constituent directors is largely one of obtaining a broader perspective on the board and a continuing attention to specific societal and environmental needs and demands. The arguments against constituency directors are based in some cases on well-founded fears of a politicization of the board rooms, and the decisiveness that special interest groups could effect. Most commentators indicated that constituency directors do pose this potential danger. "If the board room became highly politicized and resolved conflicts through shifting alliances among divergent interests and values, timely and consistent decisions could be impossible."[14] The staff, in the report, adopted a relatively noncommital posture on the issue.

EVOLVING STRUCTURE OF THE BOARD

In addition to a need for changing board composition and role, the growing demands placed on the boards of directors (of publicly owned corporations) necessitate some division of duties. Greater reliance on a committee structure seems to be a solution. In practice, a variety of special committees are already in place. Frequently included committees are an audit committee, compensation committee, nominating committee, public policy committee, and various executive committees. The SEC places greatest emphasis on the first three of these committees. The following section discusses some of the more consequential issues regarding these committees and comments on SEC conclusions expressed in their report.

The Audit Committee

"No change has been more pronounced than the swift rise in the status of the audit committee."[15] Much of the business community (including the New York Stock Exchange and the Conference Board), the accounting profession, and the SEC now hold the belief that audit committees are essential because they can view the financial and managerial activities with the kind of objectivity that only someone outside the firm can provide. This enables them to monitor the performance of management and control irregularities thereby correcting problems in their early stages and preventing future difficulties. An American Bar Association report suggests that "audit committees are so important that their presence must be considered in determining whether directors have met their standard of care."[16] Approximately 94 percent of large firms (over $150 million in assets) and about 66 percent of small firms (less than $50 million in assets) surveyed currently have audit committees.

With such recognition of the trend toward universal implementation, the attention of business and the SEC is now shifting. The point of focus now is on the extent to which audit committees are functioning effectively and which roles have and are being assumed.[17] Consensus is still developing in the business community as to the appropriate roles. Exhibit 1 presents the normative duties included in legislation proposed to the U.S. Congress in 1980 as a result of hearings before the Senate Banking Committee. Table 2 presents the current activities of standing audit committees as shown by the SEC survey of 1,200 proxy statements. Table 3 illustrates the general profile of the composition of these audit committees.

Regarding performance, as shown in Table 2, the commission explicitly expressed some concern that approximately 16 percent of the boards indicated that they did not review audit results, and an average of 26 percent of all firms failed to review the audit plan. These

EXHIBIT 1

PROPOSED FUNCTIONS OF AUDIT COMMITTEES

1. Review the arrangements and scope of the independent audit examination.

2. Review, upon completion of the audit, the following items with the independent auditors:
   a. Any report of opinion in connection with the audit
   b. The extent to which the corporation resources can and do minimize the time spent by the independent auditors
   c. Any significant transactions detected during the audit which were unrecorded, unauthorized, or not adequately supported
   d. Any material change in the corporation's accounting principles
   e. All significant adjustments proposed by the auditor
   f. The scope of the auditor's examination
   g. Any recommendations for improving internal accounting controls and choice of accounting principles

3. Investigate and make recommendations concerning the cooperation which the independent auditors received from corporation officers and employees.

4. Hire and dismiss the independent auditors and determine the compensation which they shall be paid.
5. Inquire of employees and the auditors as to any deviations from the corporation's established codes of conduct; periodically review such policies.
6. Meet with the corporation's chief financial officer and others at least twice a year to review policies and procedures of internal accounting controls, including the internal audit functions.

7. Direct and supervise investigation into matters brought to its attention within its duties.
8. Review executive perquisites.
9. Report on the committees' activities in the annual report to shareholders.
10. Review all information for the press, the public, or shareholders which concern disclosures of financial condition and results of operation, or forecasts of such information.

Source: Adapted from SEC, pp. 306-308. Functions developed from hearings before the Senate Banking Committee, 1980.

TABLE 2

AUDIT COMMITTEE FUNCTIONS

(Percentage of Firms with Committees Performing the Function)

Size of Firm By Total Assets	*Engage Discharge Auditors a*	*Review Audit Plan*	*Review Audit Results*	*Approved Services*		*Review Internal Control*	*Direct Investigations*
				Individually	*By Range*		
Over $150 million	5	74	85	61	45	79	11
$50 to $150 million	4	75	85	60	40	66	7
Under $50 million	7	72	84	53	42	64	10

a As regards the primary function of auditor engagement and discharge, data generation problems were noted and the likelihood of errors in responses was acknowledged.

Source: SEC survey of 1,200 proxy statements.

TABLE 5

AUDIT COMMITTEE PROFILE

[illegible]	Number of Committee Members	Percentage of Employee Members	Percentage Who Were Serving for [illegible] Time	Number of Meetings
Over $150 million	3.9	4.4	15.1	3.1
$50 to $150 million	3.8	9.2	19.1	2.5
Under $50 million	3.2	9.2	21.8	2.1

Source: SEC survey of 1,200 proxy statements.

are considered fundamental audit committee functions.

Engaging and discharging auditors is done by audit committees in less than 8 percent of the firms, and less than 15 percent of the firms have audit committees that direct investigations. While both of these functions are not commonly done by audit committees, they are, nevertheless, activities that can have an important impact on the financial activities of the firm and are included in the proposed legislation.

The commission was also concerned that committees are not entirely made up of directors that are truly independent of managment, as shown in Table 5. The proposed legislation would mandate 100 percent outside, independent membership.

The SEC staff also expressed concern that efforts to expand the functions of the audit committee further might overload this committee. While the staff felt that all the functions are important, they were uncertain whether to establish further subcommittees or whether another board committee might assume some of the responsibilities. The functions of the audit committee discussed in the SEC staff report are listed in the same order of presentation as in the report, which can be interpreted to indicate relative importance.

1. Recommend or approve the selection of the independent auditor
2. Review of the audit plan
3. Review of the audit results
4. Review of internal controls
5. Review of interim financial information
6. Review of press releases
7. Special investigations
8. Internal control function
9. Review codes of ethics
10. Provide information and input to the board of directors.

Several comments and recommendations with respect to the four most important functions may be helpful. While item 1, relating to selection of the auditor, is relatively self-explanatory, many firms expand this function to review and approve nonaudit services by the auditor. The issue here is one of limiting the financial dependence of the auditor on the client.

In regard to item 2, review of the audit plan, several specific items might be considered by the firm seeking to improve the effectiveness of its audit committee. A report from the Conference Board suggests that the audit committee should consider—

—The purpose of the audit plan presented by the external auditors.
—The procedures and methods to be followed in carrying out the audit.
—Reports to be generated by the audit.
—Proposed staffing of the audit team.
—Locations to be visited for the audit.
—Any exclusions from the scope of the audit.
—Areas of special concern to either the auditors or the committee.
—Special audits if the committee feels them necessary.[18]

Regarding the reviewing of the audit results, item 3, other authorities suggest that the audit committee should ascertain whether—

—The actual audit scope differed significantly from the planned scope, and if so, why.
—Corporate management and staff rendered complete cooperation.
—Significant problems or discrepancies were found by the auditors and if so, what recommendations were made to management to correct the problems.
—The firm's financial statements are accurate and complete and receiving an auditors' unqualified opinion.[19]

Concerning item 4, review of internal controls, Mautz and Neumann note that "one of the surest marks of a maturing audit committee is increased attention to the internal audit function."[20] Internal auditors become natural allies to audit committee members in their evaluation of internal control of the firm. Working closely with the director of internal auditing is certainly a logical approach to follow in evaluating internal controls.

Compensation Committee

Table 4 summarizes the current profile of standing compensation committees, and Table 5 describes their

TABLE 4

COMPENSATION COMMITTEE PROFILE

Size of Company By Total Assets	*Percentage Having Committee*	*Number of Committee Members*	*Number of Meetings Per Year*	*Percentage of Members Employed*	*Percentage of Members with Relationship*	*Percentage of Members with No Relationship*
Over $150 million	77.3	4.1	3.3	12.7	19.3	68.0
$50 to $150 million	66.5	3.6	2.4	39.2	21.2	39.6
Under $50 million	49.1	3.5	2.1	18.3	20.6	61.1
Average	67.2	3.8	2.8	15.7	20.1	64.2

Source: SEC survey of 1,200 proxy statements.

TABLE 5

COMPENSATION COMMITTEE FUNCTIONS

Functions	*Percentage*
Approve or recommend compensation for senior management	89.0
Adopt compensation plans in which officers may participate	48.3
Administer stock option plans	50.6
Other	32.3

Source: SEC survey of 1,200 proxy statements.

functions. The fact that the primary functions of the committee relate to management remuneration again suggests the need for independent director-members. While the percentage of compensation committee members without an employee or special firm relationship is lower than for audit committee members, the report concludes that the compensation committees, "for the most part, are dominated, or entirely made up of nonmanagement directors."[21]

The lower incidence of compensation committees (67 percent) relative to audit committees (84.5 percent on an overall basis) indicates an area where improvement is certainly still possible. The SEC staff did not express, however, any apparent intent to pursue a policy mandating action. Rather the expressed SEC policy was one of continued disclosure. Specifically, the report repeated the existing SEC position that, "the commission believes that disclosure concerning an issuer's compensation committee and its composition would permit investors to better assess *the process* by which management and director compensation is determined."[22]

Nominating Committee

Since the objective of this SEC effort was to find ways to make corporations "more responsive to their shareholders and the public at large," it is not surprising that the nominating committee which proposes individuals to serve on the board of directors, was considered very important. In fact, the report notes "nominating committees are potentially the most significant channel for improved corporate governance, since over a period of time...(they) can have a marked impact on the composition of the board of directors and the manner in which management succession is effected."[23]

To make the corporation more responsive, old nominating methods must be abandoned. The procedure where additions to the list of directors are identified and selected by the chief executive officer for formal board approval at a meeting of existing board members seems inappropriate for a public corporation. A truly independent nominating committee performing its own search function would serve to institutionalize general board independence.

Table 6 shows that nominating committees are much less prevalent than either audit or compensation committees and that total independence of composition is not yet a fact. The functions of the nominating committee are shown in Table 7. The advantages of forming this type of committee, comprised largely of outside directors, seems obvious in view of the objective of increased corporate accountability to the investor and to the public. Also, such a committee will shelter firm management from continued criticism and attack over the remuneration issue. Despite this, management reaction may at first be quite negative—to surrender control over one's own remuneration or the power to appoint those with this capacity is clearly a threat. Experience with such a committee will likely allay what for most is a groundless fear.

Other Committees

The report's conclusions, while certainly strongly supporting the three committees mentioned here also

TABLE 6

NOMINATING COMMITTEE PROFILE

Size of Company by Total Assets	*Percentage Having Committee*	*Number of Committee Members*	*Number of Meetings Per Year*	*Percentage of Members Employed*	*Percentage of Members with Relationship*	*Percentage of Members with No Relationship*
Over $150 million	35.8	4.8	2.0	17.8	18.7	63.5
$50 to $150 million	14.8	3.8	1.0	28.8	23.8	47.4
Under $50 million	7.9	3.9	1.6	28.1	19.9	52.0
Average	28.0	4.5	1.8	20.8	19.6	59.6

Source: SEC survey of 1,200 proxy statements.

TABLE 7

NOMINATING COMMITTEE FUNCTIONS

Function	*Percentage*
Select or recommend nominees for election as directors	94.6
Consider shareholder recommendations of nominees for election as directors	7.7
Evaluate incumbent directors	18.8
Other	27.2

Source: SEC survey of 1,200 proxy statements.

suggest that, depending on the nature of the company, others may also be desirable. Possibilities include an executive committee to act for the board between board meetings, a public policy committee to coordinate company policy and communicate it to the public, and a shareholder relationship committee to act as liaison with shareholders on matters of information and inquiry.

CONCLUSIONS

The need for board member independence from management is certainly the topic that ties together the entire report's findings concerning boards of directors. Throughout the report it is obvious that the SEC perceives a situation in which management has, in the past, had too much control over the board of directors and therefore was only responsive unto itself. The emphasis is on the board's role of monitoring management's performance. To perform this role effectively, at least a majority of directors should be independent in that they have no other business relationships with the firm. In addition, to operate effectively, there is a need for active audit, compensation, and nomination committees.

The combination of the empirical results and the SEC's interpretations summarized in this paper should certainly serve to stimulate directors to serve aggressively in their roles.

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[1] In the broadest sense, corporate accountability mechanisms are those means by which corporate activities are monitored on a timely basis by responsible parties.

[2] Securities and Exchange Commission, *Release No. 13901*, U.S. Government Printing Office, Washington D.C., August 29, 1977.

[3] Securities and Exchange Commission (Division of Corporation Finance), Staff Report on Corporate Accountability (U.S. Government Printing Office, 1980), p. 428.

[4] Ibid. p. 457.

[5] Ibid. p. 469; SEC Release Number 15389.

[6] Ibid. p. 458.

[7] Ibid. p. 455.

[8] Ibid. pp. 457-458.

[9] John E. Cooney, "Griffith's Resignation at RCA Follows Year of Turmoil, Criticism," *The Wall Street Journal* January 26, 1981, p. 1.

[10] SEC, p. 442.

[11] Ibid. p. 517.

[12] Ibid. p. 447; S. Kumar Jain, "Growing Concerns: Involving New Directors in Small Company Management," *Harvard Business Review* (July-August, 1980), pp. 162-170.

[13] Ibid. p. 444.

[14] Ibid. p. 465.

[15] Ibid. p. 481.

[16] Ibid. p. 481; "The Overview Committees of the Board of Directors," Committee on Corporate Laws, *Business Lawyer* (1980) 35: 1335, 1352-1353.

[17] Ibid. p. 478.

[18] Jeremy Bacon, *Corporate Directorship Practices: The Audit Committee*, A Research Report from the Conference Board, 1979.

[19] Ibid., and R. K. Mautz and F. L. Neumann, *Corporate Audit Committees: Policies and Practices*, Ernst and Whinney, 1977.

[20] Mautz and Neumann, p. 12.

[21] Ibid. p. 520.

[22] Ibid. p. 512.

[23] Ibid. p. 521.

Arizona Construction Activity: A Current Perspective

JAY Q. BUTLER

The construction industry, which has been adversely affected by a recessionary economy for the past two years, is viewed with some optimism. A period of recovery and growth is expected toward the end of 1982.

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The stagnation that has plagued the economy throughout 1981 appears to have turned into a recession. While the current economic downturn is now affecting more industries than were affected in early 1980, the construction industry, especially homebuilding, has been adversely affected for the past two years. Debate continues about the length and depth of the current recession, but there is reason for some hope that an economic resurgence will occur by mid-1982. The negative notes are an unspecified federal deficit, unknown federal borrowing requirements, mounting business inventories, and a restrictive monetary policy. The positive notes are descending interest rates, increased defense spending, investment oriented tax cuts, stable oil prices, and reduced inflation.

A very positive factor appears to be the acceptance of the tax exempt savings account. While the specific effects are still largely unknown, the consensus appears to be that the program will provide needed benefits for lenders, mainly in reducing deposit costs since most of the deposited funds will come from higher interest accounts already held by the institution. By lowering their deposit costs, the lending institutions will regain economic viability which in turn should lead to lower interest rates and more availability of mortgage funds.

The big question, however, is whether the positive or the negative factors will dominate. In any case, it appears that the recession will continue through the first quarter of 1982 with some growth expected by summer.

PHOENIX AREA SURVEY

Because the housing sector is such an important element of the construction industry, strong construction activity cannot occur until there is a housing recovery. The primary concerns are the level of interest rates and general economic conditions that will allow the consumer to be secure in making the housing purchase. In a survey conducted by the Arizona Real Estate Institute for Phoenix Magazine Publishing, Inc., it was found that people are beginning to accept higher interest rates. In previous surveys, the highest acceptable interest rate was 12 percent while the current survey found a significant level of acceptance in the 13 to 14 percent range. Hence, market activity should begin to increase as the interest rates reach this range, possibly by late 1982 or early 1983.

In the same survey, it was concluded that the attitude toward the home purchase has definitely changed for many people. Until the late 1970s, the home was a place to live that did not rapidly change in value. However, due to inflation and demand pressures, home values have rapidly increased. Hence, people found that their best investment was the one that they were living in. Now, some people view homes primarily as an investment that they will regularly trade to continue to derive their return, the main concern being whether homes will continue to increase in value.

As shown in Table 1, new home sales have declined compared to this time last year. However, the survey found that people are still interested in purchasing a newly constructed home. Sixteen percent of the respondents stated that they are certain they will purchase a home within the next year, especially if interest rates were to decline to around 14 percent. This group is 25 to 35 years old and has a dual income (both husband and wife are working) in the range of $25,000 to $49,999. About half of this group are currently renters who are willing to make a down payment of around $5,000 to acquire a home priced from $50,000 to $60,000. The remainder of the group are homeowners who are willing to make a down payment in excess of $20,000 on a new home priced from $76,000 to $90,000, which is similar to the value of their current residence.

Twenty-two percent of the surveyed group said that there was no chance that they would make a purchase within the next year. While their income and age ranges are comparable to the group that did plan to buy, they have lived longer in their homes (five or more years compared to around three years) and have smaller mortgage payments ($300 or less compared to $600 to $800). This group that definitely will not buy in the next year was found to accept interest rates of 12 percent or less. Hence, they tend to view their home primarily as a residence while the group that does plan to buy views their home as an investment.

Although higher interest rates may be gaining reluctant acceptance, the newer mortgage instruments are not being readily accepted. The only two plans that have gained acceptance are the graduated payment mortgage (low monthly payments in the beginning with payments gradually increasing according to an established schedule) and the buy-down (the interest rate is reduced 3 percent for the first three years then returns to the rate it was on the date of purchase). The remainder, such as the variable rate mortgage, the renegotiable rate mortgage, and the shared appreciation mortgage, were not acceptable to any definable group. The most probable group were those that needed or wanted a home now, primarily renters who moved recently from other parts of the country. Younger people under 30 also showed a greater tendency to accept the newer mortgage instruments.

As in previous surveys, the respondents continue to agree that new homes, when compared to resale homes, are better investments, are better designed, have better floor plans, are more energy efficient, and provide more options. However, there is a tendency to believe that resale homes are better constructed and easier to finance.

TABLE 1

NEW HOME PERMIT AND SALES ACTIVITY
IN MARICOPA COUNTY

	Permit Activity	*New Home Sales Activity*	*Resale Activity*
1st Quarter			
1980	2,864	5,231	4,193
1981	3,698	2,191	6,170
2nd Quarter			
1980	1,765	2,960	6,258
1981	4,605	4,281	8,493
3rd Quarter			
1980	4,873	3,894	8,433
1981	2,102	3,143	7,984
Nine Month Total			
1980	9,502	12,085	18,884
1981	10,405	9,615	22,647

Source: Marketron Data Services, Phoenix, Arizona; Bureau of Business and Economic Research, College of Business Administration, Arizona State University.

CONSTRUCTION ACTIVITY: THIRD QUARTER, 1981

Total construction activity for Arizona during the third quarter of 1981 showed 18,689 permits valued at $571 million. This represents a 28 percent decline in the number of issued permits (25,654 to 18,689 permits) and a 32 percent decrease in dollar value ($753 million to $571 million) over the previous quarter. Much of this decreased activity occurred in Maricopa County, which had a 39 percent decline in permit activity (15,277 to 9,322 permits) and a 40 percent decrease in dollar value ($532 million to $320 million) in comparison to the preceding quarter. Specific areas of construction activity are reported in Table 3 and in quarterly tables at the end of this report.

Residential Sector

Maricopa County. The 2,102 single family permits valued at $100 million issued during the third quarter represent a significant decline from the second quarter when 4,603 permits worth $214 million were recorded. Table 2 shows the monthly decline in single family activity throughout the third quarter.

TABLE 2

SINGLE-FAMILY BUILDING PERMITS
(Third Quarter, 1981)

Month	*Number of Permits*	*Dollar Value (millions)*
July	743	$ 34
August	881	42
September	478	24
Total	2,102	$100

Source: Bureau of Business and Economic Research, College of Business Administration, Arizona State University.

Much of this decline is due to adverse economic conditions, especially high interest rates, which have kept consumers from satisfying their housing needs. Furthermore, the severity of the decline can be partially attributed to the fact that many people were postponing activity with expectations of lower interest rates in the future. In addition, higher development fees resulted in an excessive number of permits being taken out during the first two quarters of 1981. As shown in Table 1, these factors resulted in single family permit activity for the first three quarters exceeding the level achieved in a comparable period of 1980. Until the permit inventory is significantly reduced through usage or expiration and until economic conditions are better, strong improvement in the homebuilding sector cannot be expected.

Table 1 also reports on sales activity. New home sales activity has been very stable through 1981 but has reported a 20 percent decrease over the same period of a year ago. Yet, while new home activity has been declining, resale activity has reported a 20 percent increase in activity, much of which can be attributed to the use of seller financing. However, some evidence indicates the properties appropriate for use in alternative financing are declining, which could result in a stagnation or decline in sales activity.

TABLE 3

ARIZONA CONSTRUCTION ACTIVITY
(Current Quarter, Previous Quarter, and One Year Ago)

			COMMERCIAL							
	SINGLE FAMILY		*APARTMENTS*[a]		*OFFICE BUILDINGS*[b]		*RETAIL STORES*[c]		*INDUSTRIAL*	
	Number of Permits	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*
Maricopa County										
3rd Quarter, 1981	2,302	99,846,430	48	12,738,500	109	65,071,430	121	16,429,186	137	40,006,767
2nd Quarter, 1981	4,603	213,580,214	118	125,955,675	80	39,522,240	125	30,441,095	134	28,518,419
3rd Quarter, 1980	4,875	191,860,776	78	46,297,903	49	10,540,121	120	33,154,585	148	50,546,533
Pima County										
3rd Quarter, 1981	688	37,397,997	12	5,726,100	80	13,612,880	57	56,537,901	5	3,645,000
2nd Quarter, 1981	625	37,269,546	15	9,525,795	37	10,258,818	54	23,089,656	3	188,800
3rd Quarter, 1980	1,407	74,641,097	18	5,460,100	55	11,611,500	37	14,506,272	1	800,000
Rest of Arizona										
3rd Quarter, 1981	1,018	49,054,251	30	12,166,324	35	6,100,575	93	12,741,686	25	754,092
2nd Quarter, 1981	1,485	63,260,383	19	5,691,286	47	3,907,243	104	4,891,471	20	1,855,353
3rd Quarter, 1980	1,673	40,509,168	14	2,852,504	25	3,725,906	99	5,650,600	14	473,750
Arizona Total										
3rd Quarter, 1981	4,008	186,298,678	90	30,630,724	224	84,820,843	271	85,422,775	167	44,404,459
2nd Quarter, 1981	6,713	314,116,145	152	140,948,756	164	52,188,299	283	58,425,102	157	30,562,572
3rd Quarter, 1980	7,955	328,726,459	110	54,592,508	129	25,877,522	255	53,091,457	163	51,820,283

[a] Five or more housing units

[b] Office, bank, medical, and professional buildings

[c] Shopping centers and other mercantile buildings

Source: Bureau of Business and Economic Research, College of Business Administration, Arizona State University.

All Other Arizona Counties. Because the housing industry in most other counties is limited, housing activity tends to be more stable than in Maricopa County. As shown in Table 3, Pima County reported 688 permits valued at $37 million, which is comparable to the previous quarter but down significantly from a year ago when 1,407 permits worth $75 million were issued.

For the rest of Arizona, there has been a very steady decline in activity as shown in Table 3. Selected counties reported the following levels of activities: Coconino County with 185 permits valued at $10 million, Pinal County with 152 permits worth $6 million, and Yavapai County with 300 permits valued at $15 million. Because of continuing housing needs but a limited housing industry, mobile homes are an important element of the housing sector in the rest of Arizona. During the third quarter, 1,387 mobile home permits were issued in the rest of the state compared to 509 permits in Maricopa County. These levels of mobile home activity are comparable to those achieved a year ago.

Commercial Sector

Maricopa County. The only construction sector to show definite improvement was the office market, which has shown very strong activity over the last several quarters. While there is some concern that the market is being overbuilt for current demand, most people expect fairly continuous demand as the Phoenix metropolitan economic base continues to grow. The main areas of development are Phoenix with 59 permits valued at $55 million, Mesa with 8 permits worth $3 million, and Scottsdale recording 32 permits valued at $6 million.

The retail sector continued to decline as the recession affected the ability of businesses, especially small businesses, to begin or expand operations. Until economic recovery can support new business investments, retail development will continue to be stagnant.

Like the new home market, the decline in apartment building can be attributed to adverse economic conditions and the high level of permits issued during the second quarter to avoid increased development fees. While the vacancy levels have declined, there is concern that the market could be rapidly overbuilt if all of the issued permits are used. Because of the current financing costs, however, not all of the permits are expected to be developed.

All Other Arizona Counties. Apartment development (5 or more units) demonstrated a strong upswing with 17 permits issued in Flagstaff for $5 million, 11 permits recorded in Tucson at $4 million, and 4 apartment permits worth $3 million in Lake Havasu City. Retail development was particularly active in Pima County with 57 permits valued at $57 million.

The office market also posted significant increases in the other counties. For example, Flagstaff recorded 15 permits worth $4 million, and Tucson had 17 permits valued at $5 million. Because several counties such as Pima, Yavapai and Coconino have strong economic futures, retail and office development should increase as general economic conditions improve.

Industrial Sector

Maricopa County. Even in face of adverse economic and financial conditions, industrial development continues at a relatively strong pace. Although several industries have announced layoffs and unemployment is expected to increase over the next few months, the future holds great promise as the metropolitan economic base continues to expand in the fast growth areas of electronics and computers. Phoenix (52 permits at $22 million) and Tempe (69 permits at $14 million) continue to be the primary areas of industrial development.

All Other Arizona Counties. Industrial development in the other counties continues at relatively low levels, the exception being an industrial permit valued at $5.[illegible] million recorded in Tucson. The key to growth in the remaining counties is an expanding industrial base that will supply jobs for newcomers and current residents.

CONCLUSION

Beyond the economic implications of the last few years, several fundamental changes have affected the real estate industry: (1) acquisition of real estate firms by large companies (e.g., Coldwell Banker by Sears and ERA by Control Data Corporation), (2) new financing instruments and organizations and (3) the changing structure of financial institutions through deregulations, acquisitions, and mergers. The final form and impact of these changes are uncertain, and probably will not be directly observable for a few years, but they will have a definite influence on the direction and development of the real estate industry.

Although the Arizona economy is one of the strongest, it too is feeling the impact of the current economic downturn evidenced through layoffs and closures in the meatpacking, electronic, and copper mining industries. Because of its underlying strength, the Arizona economy should not have as severe or as long a downturn as other parts of the country. The most appropriate description of the Arizona economy is sluggish and stagnant, but it should recover vitality through 1982.

In spite of the negative signs, there are also some positive indicators, such as the reduced FHA VA mortgage rates and reported declines at the FNMA auction, that portend some potential for a decrease in mortgage rates. One aspect of change does not make a trend, but much like a year ago, hope is increasing that the real estate market will finally enter a period of accelerated activity. Although one should not expect a consistent growth pattern, evidence does exist that the later part of 1982 will begin the long awaited period of recovery and growth.

Arizona New Housing Starts: Quarterly Report

THIRD QUARTER, 1981

BUILDING PERMITS ISSUED

	1 Family	*Mobile Homes*	*Duplex*	*3-4 Families*	*5 or More*	*Total Units*
APACHE CO	37	1	4	1	—	50
Eagar	10	—	4	—	—	18
St. Johns	5	1	—	—	—	6
Springerville	4	—	—	1	—	8
Unincorporated	18	—	—	—	—	18
COCHISE CO	68	66	—	—	—	134
Benson	2	5	—	—	—	7
Bisbee	—	—	—	—	—	—
Douglas	4	—	—	—	—	4
Huachuca City	1	—	—	—	—	1
Sierra Vista	11	13	—	—	—	24
Tombstone	4	—	—	—	—	4
Unincorporated	40	48	—	—	—	88
Willcox	6	—	—	—	—	6
COCONINO CO	183	172	7	1	18	605
Flagstaff	50	52	7	1	17	310
Fredonia	—	2	—	—	—	2
Page	3	23	—	—	—	26
Unincorporated	128	130	—	—	1	258
Williams	2	5	—	—	—	7
GILA CO	89	55	2	—	—	146
Globe	5	1	—	—	—	6
Hayden	—	—	—	—	—	—
Miami	—	—	—	—	—	—
Payson	36	25	2	—	—	65
Unincorporated	48	29	—	—	—	77
GRAHAM CO	15	53	—	—	—	68
Pima	—	1	—	—	—	1
Safford	4	2	—	—	—	6
Thatcher	2	8	—	—	—	10
Unincorporated	9	42	—	—	—	51
GREENLEE CO	5	—	—	—	—	5
Clifton	2	—	—	—	—	2
Duncan	—	—	—	—	—	—
Unincorporated	3	—	—	—	—	3
MARICOPA CO	2,102	509	20	30	48	3,425
Avondale	2	—	—	—	1	8
Buckeye	2	1	—	—	—	3
Chandler	153	—	5	—	—	163
El Mirage	—	2	—	—	1	52
Gila Bend	1	—	—	—	—	1
Gilbert	21	1	—	2	—	30
Glendale	183	—	—	—	15	309
Goodyear	—	—	—	—	1	60
Guadalupe	3	—	—	—	—	3
Mesa	114	—	6	1	—	129
Paradise Valley	15	—	—	—	—	15
Peoria	56	104	1	—	—	162
Phoenix	640	82	6	9	14	978
Scottsdale	202	—	—	—	—	202
Surprise	2	1	—	—	—	3
Tempe	244	—	2	14	10	424
Tolleson	2	—	—	—	2	27
Unincorporated	460	318	—	3	4	810
Wickenburg	1	—	—	1	—	5
Youngtown	1	—	—	—	—	1

N/R: No report

BUILDING PERMITS ISSUED

	1 Family	*Mobile Homes*	*Duplex*	*3-4 Families*	*5 or More*	*Total Units*
MOHAVE CO	156	261	4	2	5	549
Kingman City	35	3	3	1	—	48
Kingman Area	15	96	—	—	—	111
Lake Havasu City	41	2	—	1	4	127
Lake Havasu Area	—	5	—	—	—	5
Mohave Valley N	35	90	1	—	1	163
Mohave Valley S	20	32	—	—	—	52
Dolan Springs	2	18	—	—	—	20
Sacramento Val	2	13	—	—	—	15
Mohave General	6	2	—	—	—	8
NAVAJO CO	142	68	—	—	—	210
Holbrook	—	—	—	—	—	—
Show Low	10	7	—	—	—	17
Snowflake	7	—	—	—	—	7
Taylor	1	7	—	—	—	8
Unincorporated	113	52	—	—	—	165
Winslow	11	2	—	—	—	13
PIMA CO	688	430	27	6	12	1,445
Marana	—	—	—	—	—	—
Oro Valley	5	—	—	—	—	5
South Tucson	—	—	—	—	—	—
Tucson	200	144	27	6	11	620
Unincorporated	483	286	—	—	1	822
PINAL CO	152	114	2	9	4	354
Apache Jct	56	47	—	4	—	119
Casa Grande	44	—	2	2	4	104
Coolidge	1	2	—	—	—	3
Eloy	N/R	N/R	N/R	N/R	N/R	N/R
Florence	1	1	—	—	—	2
Kearny	—	1	—	—	—	1
Mammoth	2	6	—	—	—	8
Superior	—	—	—	—	—	—
Unincorporated	48	57	—	3	—	117
SANTA CRUZ CO	36	1	—	—	—	37
Nogales	N/R	N/R	N/R	N/R	N/R	N/R
Patagonia	1	1	—	—	—	2
Unincorporated	29	—	—	—	—	29
YAVAPAI CO	300	154	3	5	2	511
Chino Valley	9	24	—	—	—	33
Clarkdale	2	2	—	—	—	4
Cottonwood	11	7	—	—	—	18
Jerome	—	—	—	—	—	—
Prescott	49	4	—	3	—	65
Prescott Valley	41	25	3	1	—	75
Unincorporated	188	92	—	1	2	316
YUMA CO	35	113	2	2	1	163
Parker	2	1	—	—	—	3
Somerton	4	1	—	—	—	5
Unincorporated	20	98	1	—	1	126
Wellton	—	—	—	—	—	—
Yuma	9	12	1	2	—	29
Total, Maricopa Co., 3rd Quarter, 1981	2,102	509	20	30	48	3,425
Total, Maricopa Co., 3rd Quarter, 1980	4,873	524	51	47	78	7,692
Percent Change	-56	-2	-60	-36	-38	-55
Total, Arizona, 3rd Quarter, 1981	4,008	1,996	70	56	90	7,700
Total, Arizona, 3rd Quarter, 1980	7,840	1,895	92	90	110	12,654
Percent Change	-48	5	-23	-37	-18	-39

Arizona Building Permits: Quarterly Report

THIRD QUARTER, 1981	RESIDENTIAL*		COMMERCIAL		INDUSTRIAL		OTHER		TOTAL	
	Number of Permits	Dollar Value	Number of Permits	Dollar Value	Number of Permits	Dollar Value	Number of Permits	Dollar Value	Number of* Permits	Dollar Value
APACHE CO	51	1,173,850	6	99,000	—	—	5	339,000	62	1,611,830
Eagar	14	621,000	2	34,000	—	—	—	—	16	655,000
St. Johns	11	—	—	—	—	—	1	—	12	—
Springerville	5	—	3	—	—	—	1	—	9	—
Unincorporated	21	552,850	1	65,000	—	—	5	339,000	25	956,830
COCHISE CO	272	3,646,702	13	1,824,700	1	23,256	320	1,501,382	606	6,996,040
Benson	17	202,100	—	—	—	—	16	36,472	33	238,572
Bisbee	22	46,250	—	—	—	—	4	495,000	26	541,250
Douglas	29	362,877	—	—	—	—	60	206,546	89	569,423
Huachuca City	19	61,459	—	—	—	—	—	—	19	61,459
Sierra Vista	58	514,598	4	1,003,000	—	—	200	416,129	262	1,933,727
Tombstone	5	151,100	1	7,500	1	23,256	3	1,095	10	182,951
Unincorporated	106	2,048,518	6	802,200	—	—	33	336,140	145	3,186,858
Willcox	16	259,800	2	12,000	—	—	4	10,000	22	281,800
COCONINO CO	624	12,465,644	62	17,907,056	—	—	141	914,257	827	31,286,957
Flagstaff	145	4,813,128	48	12,922,870	—	—	95	159,109	286	17,895,107
Fredonia	3	1,000	—	—	—	—	5	17,300	8	18,300
Page	47	211,678	3	3,278,608	—	—	8	—	58	3,490,286
Unincorporated	407	7,157,116	11	1,705,578	—	—	20	187,487	438	9,050,181
Williams	22	282,522	—	—	—	—	13	550,561	37	833,083
GILA CO	247	3,466,295	19	574,288	4	58,688	126	479,592	396	4,578,863
Globe	16	205,211	3	289,900	1	8,000	13	26,600	33	529,711
Hayden	—	—	—	—	—	—	9	14,230	9	14,230
Miami	1	1,600	—	—	—	—	17	144,515	18	146,115
Payson	110	806,246	3	124,388	3	50,688	72	142,947	188	1,184,269
Unincorporated	120	2,393,238	13	160,000	—	—	15	151,300	148	2,704,538
GRAHAM CO	124	1,482,702	6	42,050	1	15,000	10	104,340	141	1,644,092
Pima	3	28,800	—	—	—	—	1	300	4	29,100
Safford	23	272,100	5	40,050	—	—	7	43,040	35	355,190
Thatcher	25	248,950	—	—	—	—	1	60,000	26	308,950
Unincorporated	73	932,852	1	2,000	1	15,000	1	1,000	76	950,852
GREENLEE CO	5	100,000	—	—	—	—	1	800	6	100,800
Clifton	2	—	—	—	—	—	—	—	2	—
Duncan	—	—	—	—	—	—	—	—	—	—
Unincorporated	3	100,000	—	—	—	—	1	800	4	100,800
MARICOPA CO	4,546	109,845,899	595	119,972,452	137	40,008,767	4,244	50,158,861	9,522	319,985,979
Avondale	4	84,495	2	183,520	—	—	20	41,973	26	309,988
Buckeye	7	45,100	6	69,400	—	—	17	54,500	30	169,000
Chandler	220	3,770,767	11	1,253,280	2	303,400	334	3,617,144	567	8,944,591
El Mirage	12	30,678	1	397,000	—	—	1	8,000	14	435,678
Gila Bend	1	30,000	—	—	—	—	1	500	2	30,500
Gilbert	38	1,080,818	3	638,453	—	—	25	100,489	66	1,819,760
Glendale	240	6,826,853	57	3,856,100	7	1,544,219	487	2,164,416	791	14,391,588
Goodyear	—	—	1	1,200,000	—	—	21	57,765	22	1,257,765
Guadalupe	8	56,100	—	—	—	—	—	—	8	56,100
Mesa	193	5,362,073	14	4,969,930	2	556,102	731	9,522,029	940	20,410,134
Paradise Valley	66	2,819,285	4	244,000	—	—	45	393,310	115	3,456,595
Peoria	175	1,615,502	6	839,205	3	1,721,500	81	1,208,457	265	5,384,664
Phoenix	1,401	35,377,094	265	84,903,257	52	21,631,446	1,448	25,924,076	3,166	167,835,873
Scottsdale	270	13,714,653	94	8,356,372	1	5,000	415	2,650,249	780	24,726,274
Surprise	9	33,850	2	176,000	—	—	13	75,622	24	285,472
Tempe	359	13,645,900	87	7,489,000	69	14,210,100	125	1,516,600	640	36,861,600
Tolleson	20	122,045	3	1,045,000	—	—	6	8,250	29	1,175,295
Unincorporated	1,270	25,106,807	38	4,265,535	1	35,000	465	2,376,745	1,774	31,784,087
Wickenburg	1	33,900	1	86,400	—	—	1	10,000	3	130,300
Youngtown	52	89,979	—	—	—	—	8	428,736	60	518,715

Arizona Building Permits: Quarterly Report (Continued)

THIRD QUARTER, 1981	*RESIDENTIAL**		*COMMERCIAL*		*INDUSTRIAL*		*OTHER*		*TOTAL*	
	Number of Permits	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*
MOHAVE CO	694	9,806,679	45	8,266,505	—	—	626	1,364,888	1,365	19,437,872
Kingman City	71	1,541,655	9	376,196	—	—	25	47,549	105	1,965,400
Kingman Area	170	1,755,618	4	342,336	—	—	183	226,556	357	2,322,510
Lake Havasu City	68	1,827,726	18	4,869,424	—	—	45	350,983	131	7,048,133
Lake Havasu Area	9	79,388	—	—	—	—	12	18,088	21	97,476
Mohave Valley N	212	2,782,167	9	2,576,310	—	—	224	549,542	445	5,908,019
Mohave Valley S	95	1,172,365	5	102,039	—	—	83	103,736	183	1,378,140
Dolan Springs	32	263,703	—	—	—	—	30	29,782	62	293,485
Sacramento Val	26	186,856	—	—	—	—	18	26,732	44	213,588
Mohave General	11	199,201	—	—	—	—	6	11,920	17	211,121
NAVAJO CO	357	6,694,114	14	233,567	11	93,648	67	280,770	449	7,303,099
Holbrook	3	15,170	—	—	—	—	4	92,000	7	107,170
Show Low	36	497,320	1	98,435	11	93,648	31	69,524	79	759,927
Snowflake	10	—	2	—	—	—	1	—	13	—
Taylor	11	56,400	—	—	—	—	—	—	11	56,400
Unincorporated	271	5,697,974	11	135,132	—	—	25	101,146	307	5,934,252
Winslow	26	427,250	—	—	—	—	6	18,100	32	445,350
PIMA CO	1,800	42,597,774	156	76,476,281	5	3,645,600	1,514	11,427,486	3,475	134,145,141
Marana	—	—	—	—	—	—	1	—	1	—
Oro Valley	5	330,000	—	—	—	—	—	—	5	330,000
South Tucson	22	37,510	—	—	—	—	18	115,280	40	152,790
Tucson	763	11,860,354	56	16,624,651	1	3,500,000	656	6,858,853	1,476	38,843,858
Unincorporated	1,010	30,309,910	100	59,851,630	4	145,600	839	4,455,353	1,953	94,818,495
PINAL CO	357	7,150,475	26	3,407,709	2	290,700	178	1,105,980	563	11,954,864
Apache Junction	116	2,845,687	8	1,111,192	2	290,700	71	455,627	197	4,703,206
Casa Grande	53	2,045,104	9	1,256,517	—	—	16	285,336	78	3,586,957
Coolidge	42	107,680	—	—	—	—	7	50,356	49	158,036
Eloy	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Florence	2	34,500	1	60,000	—	—	5	8,400	8	102,900
Kearny	6	26,700	—	—	—	—	4	20,236	10	46,936
Mammoth	10	—	—	—	—	—	—	—	10	—
Superior	5	16,400	1	10,000	—	—	7	38,220	13	64,620
Unincorporated	121	2,065,294	7	970,000	—	—	64	244,349	192	3,279,643
SANTA CRUZ CO	58	2,208,331	—	—	1	90,000	17	383,230	76	2,681,561
Nogales	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Patagonia	4	120,900	—	—	—	—	2	11,000	6	131,900
Unincorporated	34	1,759,190	—	—	1	90,000	7	331,350	42	2,180,540
YAVAPAI CO	736	16,563,091	47	3,446,709	4	159,800	246	1,385,582	1,033	21,555,182
Chino Valley	58	702,100	3	32,000	1	20,000	14	192,850	76	946,950
Clarkdale	9	87,080	—	—	—	—	12	16,046	21	103,126
Cottonwood	41	590,364	5	772,847	—	—	12	143,356	58	1,506,567
Jerome	4	10,000	—	—	—	—	2	900	6	10,900
Prescott	146	2,452,001	14	1,112,225	2	121,800	111	225,598	273	3,911,624
Prescott Valley	101	1,532,483	5	234,937	—	—	1	72,000	107	1,839,420
Unincorporated	377	11,189,063	20	1,294,700	1	18,000	94	734,832	492	13,236,595
YUMA CO	261	3,332,387	28	3,394,633	1	22,000	78	778,768	368	7,527,788
Parker	5	92,700	—	—	—	—	5	52,500	10	145,200
Somerton	11	259,340	2	770,847	—	—	3	29,600	16	1,059,787
Unincorporated	163	2,066,246	10	513,549	1	22,000	26	251,354	200	2,853,149
Wellton	1	38,000	—	—	—	—	1	40,000	2	78,000
Yuma	81	876,101	16	2,110,237	—	—	43	405,314	140	3,391,652
Total Maricopa Co. 3rd Quarter, 1981	4,346	109,845,899	595	119,972,452	137	40,006,767	4,244	50,158,861	9,322	319,983,979
Total Maricopa Co. 3rd Quarter, 1980	7,336	203,725,518	393	101,005,229	148	30,546,533	5,183	80,562,312	13,060	415,839,592
Percent Change	-40	-46	51	18	-7	30	-18	-37	-28	-23
Total Arizona 3rd Quarter, 1981	9,932	220,533,923	1,017	235,644,750	167	44,404,459	7,573	70,224,936	18,689	570,808,068
Total Arizona 3rd Quarter, 1980	14,088	362,563,026	772	151,700,730	162	31,684,283	8,457	126,798,256	23,479	672,746,295
Percent Change	-29	-39	31	55	3	40	-10	-44	-20	-15

*Includes mobile homes N/R: not reported

The Arizona Business Scene

Economic Aspects of Arizona's Indians

Arizona's American Indian population is a significant factor in the state's economy. The 20 million acres of Indian reservation represent 26 percent of Arizona's total land, and the 1980 Census indicates that American Indians represent 5.6 percent of the state's total population. Most of the Indians are members of one of the sixteen Arizona tribes and live on the twenty-two reservations located across the state, although some live in the urbanized areas of Phoenix and Tucson. The size and Indian population of the reservations are shown in Tables 1 and 2. In April, 1980, the total Indian population in Arizona, according to the Bureau of the Census, was 152,857.[1] Approximately 25 percent of the Indians in Arizona (38,630 as of April, 1980) live off reservations, including some Indians that are not on Arizona tribal rolls. Conversely, a number of non-Indians (14,925) were living on reservations in April, 1980.

The Navajo reservation is the largest reservation in the state, both in acreage and population. This reservation stretches across three Arizona counties—Apache, Navajo, and Coconino—as well as into Utah and New Mexico. Its population, along with that of the Hopi and Fort Apache reservations, gives the northeastern portion of Arizona the heaviest concentration of Indians in the state. In Apache County, 75 percent of the population is Indian; in Navajo County, the proportion is nearly 50 percent.

In contrast, Indians comprise only a small percentage of the population in several counties. These

TABLE 1

RESERVATIONS RANKED BY SIZE

Reservation	*Acres*
Navajo	8,969,248[1]
Papago	2,773,357
San Carlos	1,827,421
Fort Apache	1,664,972
Hualapai	992,463
Hopi	650,172
Gila River	372,095
Colorado River	268,691
Havasupai	188,077
Kaibab	120,413
Papago-San Xavier	71,095
Salt River	49,294
Fort Mohave	41,884
Fort McDowell	24,680
Ak-Chin (Maricopa)	21,840
Papago-Gila Bend	10,337
Fort Yuma	9,282
Cocopah	1,772
Yavapai-Prescott	1,399
Camp Verde	653
Pascua Yaqui	202
Payson	85

[1] Excludes 1,822,082 acres in the Navajo-Hopi Joint Use Area.

[2] Portion of reservation in Arizona.

Sources: Information Profiles of Indian Reservations in Arizona, Nevada, and Utah, Bureau of Indian Affairs, 1978; *Census of Population and Housing*, 1980, Bureau of the Census.

TABLE 2

RESERVATIONS RANKED BY POPULATION

Reservation	*Population*[1]
Navajo	72,811[2]
Gila River	7,115
Papago	6,927
Fort Apache	6,881
Hopi	6,591
San Carlos	5,875
Salt River	3,624
Colorado River	1,941
Papago-San Xavier	851
Hualapai	809
Pascua Yaqui	552
Ak-Chin (Maricopa)	375
Papago-Gila Bend	340
Cocopah	340
Fort McDowell	345
Havasupai	267
Camp Verde	178
Fort Yuma	157
Fort Mohave	127
Kaibab	94
Yavapai-Prescott	60
Payson	0

[1]Indians living on reservation.

[2]Portion of reservation in Arizona.

Sources: *Information Profiles of Indian Reservations in Arizona, Nevada, and Utah*, Bureau of Indian Affairs, 1978; Census of Population and Housing, 1980, Bureau of the Census.

counties include Cochise, Greenlee, and Santa Cruz, which have no Indian reservations within their boundaries, and Maricopa and Pima counties. The latter metropolitan counties have Indian reservations as well as a fairly large off-reservation Indian populations, though the Indian population is only a fraction of the non-Indian urban dwellers.

Every county in Arizona has Indian residents living off reservations. Likewise, every Indian reservation has non-Indians living within its boundaries. Generally, the minority population in both cases is quite small—approximately 5 percent or less of the total county or reservation population. On both the Fort Yuma and Colorado River reservations, however, the Indians are the minority population: Only 6 percent of the Fort Yuma reservation and 29 percent of the Colorado River reservation residents are Indian. Navajo County has the heaviest concentration of Indians living off the reservation: 9 percent of the off-reservation residents are Indian.

Most of the residents of Indian reservations live in small towns or rural areas. The largest town on any reservation in Arizona has a population of only about 5,000. A list of reservation towns of over 1,000 population is presented in Table 3.

TABLE 3

TOWNS OVER 1,000 POPULATION ON INDIAN RESERVATIONS IN ARIZONA

Town	*Reservation*	*Population*
Bylas	San Carlos	1,178
Chinle	Navajo	2,815
Fort Defiance	Navajo	3,431
Kayenta	Navajo	3,343
Many Farms	Navajo	1,304
Parker	Colorado River	2,542
Sacaton	Gila River	1,951
San Carlos	San Carlos	3,068
Sells	Papago	1,864
Tuba City	Navajo	5,045
Whiteriver	Fort Apache	3,587
Window Rock	Navajo	2,230

Source: Census of Population and Housing, 1980, Bureau of the Census.

Indians live under the same economic system as all other American citizens and are dependent on the cash economy. Indians pay taxes as do all other citizens, except that they are exempt from property taxes on reservation land, which is federal trust land.

In terms of employment and income, however, the average Indian is considerably worse off than the average Arizonan. The unemployment rate among Arizona's Indians is estimated to be as high as 30 to 40 percent. Of those Indians that are employed, many are earning only poverty level wages. One-fourth of the Arizona Indian families had a 1980 income of less than $3,000. The median Indian family income is estimated to be only 40 percent of the statewide median, while the average Indian family size is approximately double that of the rest of the state's population.

Natural resources on most of the reservations are limited. Irrigable land is the most common resource since several reservations are located near rivers, primarily the Colorado, Gila, and Salt Rivers. Only a few tribes have sufficient forests on their lands to provide for timber operations, and only a few tribes have sufficient mineral resources to provide for mining operations. Some tribes also have some tourism potential, but in general, Indian lands have little commercialization and industrialization. The isolated location and distance to urban centers of many of the reservations has greatly limited the development of tourism and of commercial and industrial ventures.

Many reservations therefore have limited employment opportunities. Depending on the reservation, the majority of employment may be in farming, ranching, tourism, or retail (primarily arts and crafts). The government provides much employment, and on some reservations is the major employer.

These economic conditions on the reservations have caused a number of Indians to move off the reservation or to commute to jobs that are in towns near the reservation. While a number of these Indians remain near their reservations, others have moved to the Phoenix or Tucson areas.

In addition to the lack of resources and the geographic isolation of the reservations, a lack of education hampers many Indians in seeking employment and in earning better wages. Educational facilities on many reservations are limited, and children frequently commute to towns or live away from home in boarding schools. Higher education facilities are also limited, except in the urbanized areas, although some community colleges are located on or near Indian lands. Some Indians have moved to the urban centers to seek higher education, including training in such professions as medicine and law.

Indians comprise 5.6 percent of the state's population, but a smaller portion of both the employed work force and the state's total income. In some cases there is potential to improve the employment and economic conditions of the state's Indians, but in other cases the lack of natural and economic resources, as well as cultural limitations, will continue to hamper Indian economic development.

Population figures used in this article were compiled from the 1980 Census by the Arizona Department of Economic Security.

A Survey of Arizona Business Conditions

HAROLD FEARON

As the fourth quarter began, the Arizona economy clearly was experiencing a mild slowdown, and the rate of decline is picking up speed, according to results from the monthly business survey of the Purchasing Management Association of Arizona and the Purchasing Management Association of Southern Arizona. For the first time since July, 1980, declines were recorded in the four indicators of purchased materials inventory levels, new orders received, production, and employment; and the rate of decline on each was greater than in the previous month. However, the rate of price increases also is coming down nicely, and the October increase was the smallest in almost five years.

The purchasing business survey now is in its twentieth year of consecutive monthly reporting on the current status of the Arizona economy. Data are gathered through a questionnaire sent at the close of each month to purchasing managers throughout the state, asking them to indicate the direction of activity—higher, unchanged, or lower—on six key indicators of economic activity in the month just ended. Since these purchasing managers deal daily with the forces of supply and demand, they are able to provide timely and accurate information on current business trends, which enables economic turning points to be spotted.

Prices paid for major purchased items continued to increase, but at a slightly lower rate than in September, and at the lowest rate since November of 1976. Higher prices were paid by 44 percent of the purchasing managers in October; 45 percent saw prices unchanged; while 11 percent said they paid lower prices in October than in September. The economic medicine currently being administered in Washington is slowly but surely curing the inflation problem, for the monthly rates of price increases in 1981 have been well under those of the similar months of 1980, and only about half those of the similar months of 1979. However, the side effects of that medicine have been a noticeable slowdown in economic operating rates.

Delivery time on shipments from vendors increased only slightly in October; the increase was the smallest since August, 1980. Delivery time stretchouts were reported by 25 percent of the purchasing managers, compared to a slightly smaller 20 percent who received faster vendor deliveries. As long as the economy operates with considerable slack, vendor lead times will continue to shrink.

Inventory levels of purchased materials dropped again in October, and the decrease was the largest recorded in over six years (since June of 1975). Of the firms surveyed, 16 percent said they added to inventory in October, but a much larger 42 percent cut stocks. This was the eighth consecutive monthly drop in inventory levels. Further inventory reductions will be seen through the balance of the year, as firms pare their investment in reaction to depressed operating rates. This will tend to further intensify the downturn, but it seems unlikely that massive inventory reductions will be necessary since

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Arizona firms have kept close control over stocks during this past year and have avoided unwarranted inventory buildups.

New orders received from customers declined substantially in October, and at the largest monthly rate so far this year and larger than in any month since June, 1980. Although 23 percent of the firms said their orders increased, a substantially larger 39 percent said their firm received fewer new orders in October than in September. This was the third consecutive monthly decline in the new order rate and is further evidence that the Arizona economy is experiencing a downturn.

Production also dropped, as Arizona firms adjusted output in reaction to the softening of customer orders. Higher production was reported by 23 percent of the firms, but a larger 33 percent reduced production rates. Production has increased in only four of the last ten months and probably will see further cuts over the balance of the year.

Employment declined again in October, for the fifth consecutive month, and at a rate consistent with the drop in production. While 15 percent of the firms added to their work force, a larger 25 percent pared payrolls.

Thus, the Arizona economy now is experiencing a mild downturn similar to the one which occurred in mid-1980. Unfortunately, the rate of decline is intensifying, and there does not appear to be anything on the horizon which will reverse the downward momentum. Further reductions in Arizona's economic performance are likely until a noticeable drop in both short-term and long-term interest rates occurs. Yet, the bright spot in the economy is the definite reduction in the inflation rate, which will provide the basis for more orderly and sustainable economic growth during the year to come.

The results of the October purchasing survey are shown in Table 1.

TABLE 1

OCTOBER PURCHASING SURVEY

	Percent of Purchasing Managers Indicating Each Response (October compared to September)		
Key Indicators	*Higher*	*Same*	*Lower*
Prices paid for major commodities	44	45	11
Delivery time from vendors	25	55	20
Purchased materials inventory level	16	42	42
New orders received	23	38	39
Production	23	44	33
Employment	15	60	25

Source: Survey of the Purchasing Management Association of Arizona and the Purchasing Management Association of Southern Arizona.

ARIZONA SALES OF ELECTRICAL POWER

	Sept. 1981	*Sept. 1980*	*One Year Percentage Change*	*Sept. 1981*	*August 1981*	*One Month Percentage Change*
Sales of Kilowatt Hours (Millions)	3140.9	2670.9	17.6	3140.9	3689.7	-14.9

Source: Reports from major suppliers

Retail Food Prices

OCTOBER, 1981

Retail food prices in Maricopa County remained virtually unchanged in October, following a month of unchanged prices in September. The food price survey is compiled by the Bureau of Business and Economic Research, College of Business Administration, at Arizona State University. Cosponsor of the study is Valley National Bank. The October index of 268.1 indicates that shoppers would now have to pay $26.81 for a similar basket of foods that would have cost $10.00 in 1967. These foods could have been purchased for $25.02 one year ago. The October, 1981, index reflects a 7.2 percent increase over the October, 1980, value.

Gains were noted in all but one of the subgroups. *Cereals and Bakery Products* rose 1.5 percent, followed by a 1.3 percent increase for *Other Foods*. *Meats, Poultry, Fish, and Eggs* and *Dairy Products* showed slight increases of 0.5 percent and 0.2 percent respectively. These increases, however, were offset by a 4.3 percent decline for *Fruits and Vegetables*.

Prices were higher in almost every category of *Cereals and Bakery Products* in October. Fresh biscuits, rolls, and muffins rose 5.4 percent, followed by a 5.2 percent increase for cookies. The categories of fresh cake/cupcakes and white bread both rose 2.3 percent.

Small increases in most of the categories in *Other Foods* led to the moderate gain for the overall subgroup. Nuts, potato chips, and other snacks increased 5.3 percent, followed by frozen prepared food (4.6 percent) and miscellaneous noncarbonated beverages excluding coffee (4.0 percent). Sugar/artificial sweeteners dropped 1.8 percent, while margarine and roasted coffee both fell 1.2 percent.

Price increases slightly outweighed the decreases in the *Meats, Poultry, Fish, and Eggs* subgroup this month. Higher prices for several items in the category of lunchmeats other than bologna, liverwurst, and salami contributed to its 6.4 percent gain. Increases were also noted for round roast (5.8 percent), pork chops (4.7 percent), and round steak (3.8 percent). Partially offsetting these gains were declining prices for noncanned ham (-7.6 percent), fresh whole chicken (-5.2 percent), and fresh/frozen fish and shellfish (-3.9 percent).

Prices in the *Dairy Products* subgroup, which have been relatively stable during 1981, rose only slightly in October. While cheese prices climbed 2.2 percent, prices fell for miscellaneous dairy products (-4.4 percent) and ice cream and related products (-2.2 percent).

The reduction in the *Fruits and Vegetables* subgroup, the largest since February, 1980, was the result of sharp declines in several categories. Lettuce plunged 26.8 percent, followed by potatoes (-18.3 percent), apples (-15.2 percent), and oranges (-12.2 percent). The only notable increase was posted for bananas, up 5.6 percent.

A comparison of September, 1981, Food Consumed at Home for Maricopa County with index values for four selected metropolitan areas reveals that the outlays required to purchase a food group in September (obtainable for an outlay of $10.00 at 1967 average prices) were $26.80 in Maricopa County; $27.26 in Los Angeles-Long Beach; $27.47 in San Francisco-Oakland; $26.89 in Chicago-Northwestern Indiana; and averaged $27.32 in the United States.

TABLE 1

INDEX FOR FOOD CONSUMED AT HOME

Maricopa County, United States, and Selected Metropolitan Areas
(Average 1967 = 100 percent)

Group	*Maricopa County Oct. '81*[a]	*Maricopa County Sept. '81*[b]	*United States* Sept. '81*	*Los Angeles Long Beach* Sept. '81*	*San Francisco Oakland* Sept. '81*	*Chicago North-western Indiana* Sept. '81*
Food Consumed at Home	268.3	268.0	275.2	272.6	274.7	268.9
Cereals and Bakery Products	265.0	250.1	[illegible]	286.6	285.8	274.7
Meats, Poultry, Fish, and Eggs	268.3	[illegible]	257.7	252.6	261.2	256.2
Dairy Products	235.9	255.5	[illegible]	258.2	266.8	265.0
Fruits and Vegetables	287.4	260.0	281.6	299.5	230.3	274.0
Other Foods Consumed at Home	296.7	295.0	325.7	332.2	330.4	334.5

*Computed from data contained in *The Consumer Price Index*, U.S. Department of Labor, Bureau of Labor Statistics, Washington, D.C.

[a] Maricopa County food prices are reported for the month closest to publication.

[b] Comparisons of food prices among various cities and the United States average are made on the basis of earlier months because of the lag in collecting price reports from these other areas.

Note: Index comparisons between Maricopa County and the other regions show only that food prices in Maricopa County have increased more or less than food prices in the other regions since 1967. The indexes cannot be used to determine the actual differences in food price levels between the regions.

Source: Bureau of Business and Economic Research, College of Business Administration, Arizona State University, in cooperative sponsorship with Valley National Bank.

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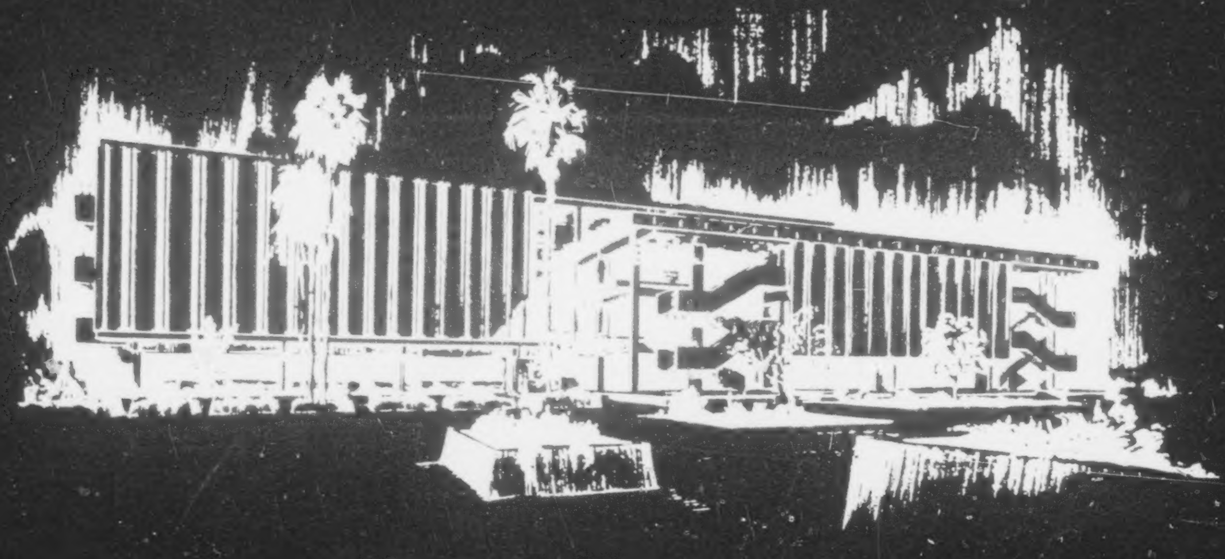

Special Feature:
Economic Forecast for 1982

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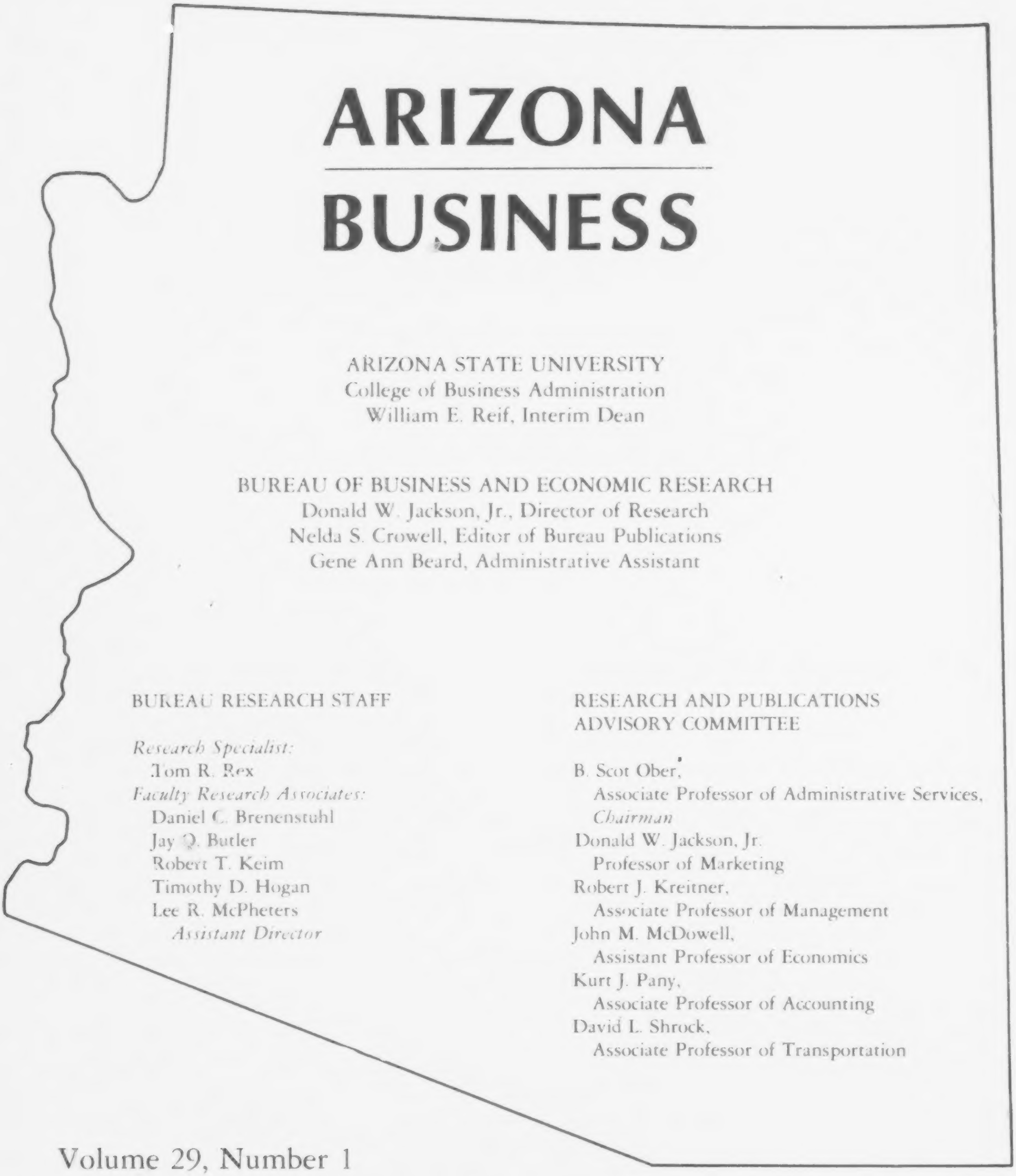

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Report To The Reader

Each December, several College of Business Administration faculty members from Arizona State University and representatives from the business community forecast national, state, and local economic activity.

The analyses are presented at the Economic Forecast Luncheon, held this year on December 1 at the Ramada TowneHouse. The presentations are featured in a special issue of *Arizona Business*.

According to Dr. John Cochran, ASU Professor of Economics, "Falling interest rates, aided by present easing policies of the Federal Reserve, should start rejuvenating the ailing housing and automobile industries by the spring of 1982. Just as serious declines in sales, output, and employment in these industries, brought on by severe credit restraint, led the entire economy into a recession, so falling interest rates should revive these industries' growth rates, which, in turn, should lead the rest of the economy out of the recession and into higher growth rates as well."

The real key to 1982, however, is the consumer. Dr. Richard Winkelman, Associate Professor of Economics suggests that, "In 1982 retail sales are expected to increase 12.5 percent in current dollars to $17.5 million. With anticipated inflation of 9.5 percent, this will translate to a 2.9 percent increase in real terms with the bulk of this gain occurring in the second half of the year."

B. Paul Jones, of Valley National Bank, agrees suggesting that, "the scheduled tax cuts should be accompanied by improved employment opportunities and rising incomes. This should provide the basis for increasing gains in retail sales as the year progresses."

In the housing market, Clark Cederlof of Western Savings said, "The early part of the year should be sluggish; . . . but as it progresses, housing activity in all sectors should improve as interest rates reach levels of approximately 13 percent."

B. Paul Barnes of Talley Industries suggested a similar pattern for manufacturing with a first half year that is flat at best and resumed growth in the second half.

Concluding the program were comments by Herman Kahn of the Hudson Institute, Goldwater Professor of American Institutions in the ASU College of Public Programs. Kahn suggested that in real terms, world oil prices will be decreasing because of increasing supply and reduced demand. In reference to the deficit problem, he recommended indexing the principle on the national debt as a possible solution.

1982: Another Year of Transition

JOHN A. COCHRAN

A year ago the forecast suggested that 1981 would be an economy in transition, and so it has proved to be. Now, it is suggested that 1982 will also be a year of transition. The year 1981 was a year of transition to an economy of disinflation instead of one of accelerating inflation. It was also the year that the Reagan program of tax cuts and budget cuts was put into place in August, 1981. Next year, the economy will be in transition from an economic recession to a period of economic growth that will begin about midyear.

The two most critical questions about the performance of the economy in 1982 are, What will the consumer, who spends nearly two-thirds of total spending which makes up the Gross National Product, do? and, What will the Federal Reserve do? The answer to the second question depends, in part, on the course of interest rates next year. What the consumer does, particularly in borrowing and spending on durable goods, depends greatly on the cost and availability of credit.

REVIEW OF 1981

In the first quarter of 1981, the United States had a very strong economy with a real growth rate around 8.6 percent. The second quarter had a 1.6 percent fall in real output, with some weaknesses starting to appear, as in housing and the automobile industry. The recession definitely began late in the third quarter even though there was a small rise of 0.6 percent in GNP, which might even have been worse except for inventory accumulation. The decline appears to have worsened in the fourth quarter to a rate of decline around 3½ percent or more. Further declines in real output are expected in the first and second quarters of 1982.

Why did a recession begin in 1981 after a relatively short period of expansion? The basic answer is to be found in the severe policy of credit restraint by the Federal Reserve in the past year, beginning in early November, 1980. Why did the Federal Reserve impose such credit restraint?

THE INFLATIONARY BACKGROUND TO CREDIT RESTRAINT, 1980-1981

In early November, 1980, American voters retired the Carter Administration and put the Reagan Administration in its place. One of the reasons was the nagging problem of inflation, which was then running at a double-digit rate. Inflation was a real problem throughout the entire decade of the 1970s—in fact, even since

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Economic recovery from the current recession should occur after midyear. Lower inflation rates and lower interest rates can be expected in 1982. This report was one of the presentations at the annual ASU Economic Forecast Luncheon on December 1, 1981.

John A. Cochran is Professor of Economics in the College of Business Administration, Arizona State University.

the mid-1960s. It was in 1965 that President Lyndon Johnson was escalating American involvement in Vietnam, which meant rising military expenditures. He was also fighting a so-called "War on Poverty," which meant rising welfare expenditures at the same time. Without a tax increase, the inevitable result was a rising budget deficit and a rising price level—inflation.

It all began in 1965, since from December 1958 to December 1964 we had had four years of relative price stability. In that period, the consumer price level did rise about 1½ percent to 2 percent per year, but in the entire period the wholesale price level did not change at all. But after 1965, inflation has been with us every year.

In mid-August, 1971, President Nixon imposed wage and price controls to deal with what now seems to be relatively mild inflation. These controls were on until February, 1973, when they were in effect removed. During the intervening period, the money supply was pumped up and the budget deficit was allowed to increase. In that year and a half, the country had suppressed inflation that was not made obvious until the controls were removed. Thereafter, in 1973 and 1974, we had accelerating inflation until the rate reached the double-digit level. Under President Ford, the rate of inflation fell.

During President Carter's four years, monetary and fiscal ease were largely followed, again with the same inevitable result of accelerating prices. Transfer payments soured as the government's share of GNP rose. In 1979 and 1980, double-digit inflation again developed.

Throughout the 1970s, therefore, we had chronic budget deficits that tended to be substantially larger from the mid-1970s on. Although monetary policy changed from time, and included substantial restraint in 1973 and 1974, we had many months, quarters, and even years of considerable increase in money supply. Quite often, the money supply grew at a faster rate than the rate of real output was growing, which is a pretty good recipe for inflation. This monetary policy, together with many years of excessive fiscal ease, not only gave us recurrent bouts with double-digit inflation, but also a trend towards ever higher interest rates. Monetary ease did not basically lead to lower interest rates but rather to higher interest rates, since lenders began to add in an inflation premium in the market rate of interest. Inflationary expectations also added to the problem of inflation in the 1970s, especially in the housing industry. Such expectations, of course, often tended to be self-fulfilling, as the higher demand for houses did indeed drive up the price of houses, as had been expected.

It should also be noted that other factors contributed to inflation in the 1970s, besides excessive fiscal and monetary ease. There were successive rounds of increases in oil prices by the OPEC nations, beginning in late 1973. There was a decline in the rate of growth or productivity for the American worker until finally, by the end of the decade, the growth in productivity was even negative. There was a lag in the growth of capital spending on new plant and equipment in part, perhaps because so much of our new capital formation was going into housing. The rate of personal saving was also falling in response to inflationary expectations. Often the value of the dollar was falling in the foreign exchange markets, which increased the dollar cost of imports and contributed to domestic inflation. Despite these other important factors, excessive fiscal and monetary ease played the key role in contributing to inflationary pressures in the United States. It was this background of a decade and a half of inflation, therefore, that led to the credit restraint policies of 1980-1981.

CREDIT RESTRAINT IN 1980-1981

Although the recent policy of credit restraint was begun in early November, 1980, shortly before the election, it was supported by the newly elected administration. The Federal Reserve is technically independent from the Executive Branch in its policy-making, but a strong President has nearly always been able to put effective corrective pressure on the Federal Reserve, if it deviates too far from his views. This recent policy of credit restraint, like the fiscal policy of the new administration, was somewhat different in that it was supposed to be geared to the long run rather than merely the short run.

Thus, the monetary policy goals for the next several years were to be announced and were expected to be followed. In particular, the growth targets for the monetary aggregates (different definitions of money) for 1981 were to be lower than those for 1980. Those of 1982, in turn, were to be lower than those for 1981. This gradual deceleration in the growth of the money supply was supposed to bring down the inflation rate. Coupled with a proper fiscal policy, inflation might even be eliminated entirely.

REAL SECTOR EFFECTS OF CREDIT RESTRAINT

Unfortunately, in order to brake rising prices, and perhaps eliminate inflation altogether, borrowing and spending had to be cut back. In the short run, a decline in credit and money expansion and a decline in consumer spending meant that real output and employment were likely to fall too. It was difficult to expect supply-side effects, even from lower tax rates, in the short run, when factories were operating at only 80 percent of capacity, which could fall to even lower levels. Furthermore, business inventories were starting to increase to undesired higher levels.

Earlier in 1981, the housing industry and the auto industry, both of which rely heavily on household borrowing in order to buy their products, found that their sales were falling and that their inventories of unsold products were rising. By late summer, auto production had to be cut as auto sales fell, and in November was 25 percent lower than a year earlier. Both housing and autos had fallen to their lowest sales levels in a number of years.

Housing starts were well under the 1 million annual rate, and in September were running at the lowest rate in six and a half years. In October, housing starts fell to even lower levels. Demographers tell us that with the baby boom coming of age and forming new families of their own, along with the replacement of some existing housing units, that we should be building about 2 million houses per year. Auto sales, too, even adding in foreign imports, had fallen to very low levels. In both industries, some companies offered subsidized interest rates, which were substantially below market levels, as well as dollar rebates and other price cuts, in order to move some of their backed-up inventory.

But by fall of 1981, the recession had become general. It was not restricted any more to the housing and auto industries. October outlays on construction declined by 1.8 percent. New factory orders for durable goods declined in August by 2.5 percent, which was the first monthly decline since January. These orders declined an even sharper 2.9 percent in September and 8 percent in October. The Economic Index of Leading Indicators fell 1.8 percent in the same month. This followed a decline of 2.2 percent in such indicators in September. Machine tool orders declined in September to the lowest level in five years. During the third quarter of 1981, machine tool builders received only $597.3 million in orders, which was down 34 percent from the previous year. Construction awards also fell 1 percent in October. This was the weakest quarter since the second quarter of 1976, when industry was recovering from the serious recession of 1973-1975.

Why were these adverse effects on sales and output occurring? It was, of course, sagging consumer spending that resulted in these difficulties, not only for housing and autos, but for many other industries as well. Consumer income actually rose in both September and October, but consumer spending fell in those months anyway. In September, the gain in personal income was a strong 0.8 percent, but spending fell by 0.1 percent. This still left consumer expenditures at a seasonally adjusted $1.9 trillion annual rate.

But the marginal changes in spending, and saving, are important to retailers, and other business people, as well. Consumer spending, which had risen somewhat in August, was sustained in part by a decline in the savings rate from 5 percent in July to only 4.9 in August. By October, however, the savings rate was rising. Both of these rates of saving are well below the long term trend rate of personal saving. In the decade of the 1970s, despite two periods of accelerating inflation and varying rates of personal saving, the annual average for the personal saving rate was more than 7 percent. Even last year, in 1980, the savings rate was estimated at 5.7 percent. It should be apparent, then, that savings rates in mid-1981 were running at very low levels. However, when households decide to increase their rate of saving, they are also deciding to reduce their rate of spending. And there's the rub for business firms wanting more consumer spending, so that they can have higher retail sales.

On October 1, 1981, a 5 percent personal tax cut went into effect, which thereby increased disposable income. The pay envelope was now slightly larger. Apparently, consumers are deciding to save a good part of this tax cut, just as the Reagan economic planners expected. Partly, this may be due to growing uncertainty in a period of economic recession, partly it may be due to higher interest rates available on all kinds of savings plans, and partly it may be due to consumers reverting back to their long-term trend of saving. Whatever the reasons, real retail sales (i.e., retail sales adjusted for about a 6 percent rise in prices) did, in fact, fall in October. Somewhat sluggish consumer Christmas sales, especially in some higher priced lines, are now being anticipated by some retailers.

THE BUDGET AND TAX CUTS OF AUGUST 1981—REAGANOMICS

The general thrust of the new Reagan economic plan, sometimes called Reaganomics, which was put into place before the recession became apparent, was to reduce the relative role of the federal government in the economy. That is to say, to reverse, at least in part, the move towards a bigger government, which had begun with the New Deal nearly a half a century ago. This meant not only less government regulation of various private business enterprises, but also fewer welfare transfer payments, and indeed less government spending generally. The major exception was to be military spending, which was to rise sharply in order to restore the strong position of the United States in world affairs. At the same time that government spending was to be reduced, business taxes and personal taxes were to be reduced substantially in order to spur private saving, private investment, greater economic growth, and even a lower inflation rate. The energies of the private market economy were thus to be more relied upon, while the past guiding, balancing, and supporting role of the federal government was to be reduced.

While all of these important structural changes were occurring in the relative importance of the public and the private sectors, the deficit in the federal budget was also to be reduced each year, until it was balanced in fiscal year 1984. The first stage of the Reagan economic plan was enacted by Congress in August, 1981. Considerable numbers of Democrats in both houses, as well as virtually all Republicans, voted for the budget and tax cuts, and increases in military spending. In August, public opinion seemed to be strongly behind the program.

The only fly in the ointment at the time seemed to be Wall Street. The stock market had had recurrent sinking spells since January and by fall was below the high levels earlier in the year. More critical was the performance of the money and the bond markets. Even though the rate of inflation was generally falling throughout 1981, with some months as exceptions, interest rates did not go down, as had been widely expected both in and out of the administration, but rather continued straight up until they finally peaked in October and November.

Wall Street, though generally supportive of the new Reagan program, particularly as viewed from the point of view of a long-run stimulus to the economy, was worried about the short run, in particular the next several years out to 1984. Bond dealers worried that inflation rates would not fall as rapidly as were being predicted in some quarters, and, further, that the real growth rate of the economy generally would not accelerate as optimistically as had been predicted. They also worried that Congress might be more reluctant, than in the first stage, to carry out the second, and third, and even fourth stage of budget cuts, which were called for in the entire Reagan program.

If any or all of their worries materialized, then the budget deficit would rise, instead of falling, and interest rates, instead of falling, would also rise. The pessimistic expectations of $60 billion federal borrowing in the fourth quarter of 1981 and the first quarter of 1982, thus held in Wall Street, added to the very real existing overload on the bond market. Among underwriters there was generally a belief that large prospective sales of corporate bonds—perhaps as much as $75 billion in the next few months—could also occur. These twin fears of large public and private borrowing resulted in immediate higher rates on bonds rather than lower interest rates. This, in turn, helped to make the federal budget larger. By the time fiscal year 1982 began on October 1, 1981, interest payments alone were nearly $100 billion, while the total debt was over $1 trillion.

Taxes were to be cut by about $240 billion over the next four years and it was not clear either that government expenditures would be cut that much, or that rising tax revenues would account for the remaining billions. Hence, the deficit seemed likely to grow rather than fall in the short run. The budget deficit of some $55 billion in fiscal year 1981 is likely to be followed by a deficit around $80 billion or more in fiscal year 1982.

Of course, the economic recession of 1981-1982, as well as the tax cuts of August, 1981, will give the government a still larger tax shortfall and thus a larger budget deficit. Not only had the recession brought on the severe credit restraint by the Federal Reserve in 1980-1981, but policies of credit restraint pushed up interest rates, which, of course, further enlarged the budget deficit, which tended to push up interest rates. It seemed like a Catch 22 situation!

WHAT TO DO ABOUT THE RECESSION?

What should the policy makers do about the current recession? Possibly they could ignore it and maybe it would go away. However, rising unemployment rates with full media coverage are difficult to ignore entirely, especially if they rise from the current 8 percent to the neighborhood, possibly, of 8½ to 9 percent. It should also not be forgotten that there is another Congressional election in November, 1982, and that unemployed workers, and those worried about high interest rates, can vote too, just the same as people worried about inflation.

Since the tax and budget cuts were so recently enacted in August, and they were fundamentally designed for the long run anyway, it seems reasonable that they should not be changed. This would include the personal tax cut of 10 percent scheduled for July 1, 1982 and the further personal tax cut of 10 percent scheduled for July 1, 1983.

But the recession is deepening and the budget deficit is rising. In the first place, almost everyone agrees that a recession is not an appropriate time to increase taxes, of whatever kind. (Consumption taxes may be raised later, but probably not until 1983.) Further budget cuts may still be appropriate, but politically they will be quite difficult to get through Congress in a recession period. What then do we turn to?

What about monetary policy? After all it was monetary policy that got us into the recession in the first place and surely monetary policy could now be used to get us out of it. Monetary policy has often been used in this way before. Countercyclical monetary policy has become a byword among economists: credit restraint in a period of business upswing, when inflationary pressures develop, and credit ease in an economic downswing, when unemployment rates rise, and inflationary pressures are easing anyway. But isn't that the road to further inflation in the future? Maybe so, but what can the Federal Reserve do now? There will be plenty of critics both in and out of the government, who will doubtless criticize them regardless of what they do, or don't do.

RESORT TO MONETARY EASE BY THE FEDERAL RESERVE

The present guess is that the political and economic risks of inaction on the part of the Federal Reserve now are greater than the risks of action, especially in the direction of stimulating the growth of bank reserves and the money supply. If such stimulus is forthcoming, continuing decline in interest rates would be expected in the short run. Certainly there are already plenty of signs that the Federal Reserve has begun some such easing, as recession in the real sectors of the economy has deepened. Even before the most recent Federal Open Market Committee meeting on November 17, the Federal Reserve had removed the last of the surcharge on frequent, large borrowings by the depository institutions. Already in October, it had lowered the federal funds target from a 15 to 21 percent range down to 12 to 17 percent.

The 4 percent surcharge had earlier been cut in two steps to 2 percent, and now it was removed entirely. The basic discount rate, to the disappointment of some observers, was still left, however, at 13 percent, although it had been cut from 14 percent in early November. Nevertheless, the key federal funds rate, on which open market operations of the Federal Reserve has considerable impact, was allowed to fall below earlier levels. Other money market rates, and bond yields too, plunged almost day by day, after the recession and the easing of monetary policy were accepted as facts in the financial markets.

There is a real danger that the Federal Reserve might ease too much, too soon, as it has often done in the past. If it does, Americans will subsequently pay for the present decline in interest rates with higher inflation rates in the future. Nevertheless, the Federal Reserve this year has been very cautious and very persistent in following its credit restraint policy, until signs of the recession were clearly evident this fall. In fact, the narrow definition of money (M-1B this year, which is redefined as M1 next year) has been growing all year long below the bottom of its target range. Only the broader definition of money (M2), which includes money market mutual funds, has been on the high side of the range and sometimes just outside of the high end of the range. In light of this cautious policy up until now and the growing deterioration in the economy, it is not inappropriate for the Federal Reserve to follow such an easing policy now. It should be noted that growth in the money supply is a necessary, but not a sufficient, condition for real growth in the economy. It should also be noted that this is also largely true for inflation.

Nevertheless, one should not be surprised if the Federal Reserve begins gradually moving away from an easing policy by late spring and early summer, when economic activity begins to strengthen. In fact, whatever declines in both short and long interest rates that occur between now and then should be largely due to declines in the demand for money and credit (declines in the demand for borrowed funds) rather than to large new increases in the supply of loanable funds added to by the Federal Reserve due to an excessive rate of growth in bank reserves and the money supply, however defined.

On October 6, 1979, more than two years ago, the Federal Open Market Committee (FOMC) committed itself to a stronger emphasis on controlling the rate of growth of the various monetary aggregates with much less concern as to what happened to interest rates. They had, in fact, even said something like that in January, 1970, but this time they said it even stronger. Subsequent events seemed to bear out that they took this new commitment even more seriously. Interest rates were not altogether to be ignored, since the key federal funds rate was still expected to fluctuate within a broad band set by the FOMC, 12 to 17 percent. Nevertheless, this represented much greater freedom for interest rates to vary than before, when the trading desk at the Federal Reserve Bank of New York, in response to the Domestic

Policy Directive of the FOMC, appeared to the market to be controlling the federal funds rate within a very narrow band.

INTEREST RATES IN 1981 AND 1982

Interest rates in 1981 have hit new record levels as a result of the policy of severe credit restraint by the Federal Reserve. From January to late fall, interest rates for all maturities rose until they peaked in late fall. This was true despite the general decline in the rate of inflation from the double-digit levels of 1979 and 1980 to about 9 percent in 1981. Next year, the basic inflation rate should fall to about 7½ to 8 percent. This, along with the decline in the demand for borrowed funds by private borrowers as a result of the current recession, should allow interest rates to fall from recent lofty levels.

It should also be noted that in the past two years that not only have we had record high interest rates, but we have also had an inverted yield curve—one that has a negative rather than a positive slope. That is to say, short term rates have been considerably higher than long term rates. Normally, we expect the relationship to be the other way around. This inverted yield curve developed because as interest rates rose generally, many business borrowers shifted to put the emphasis in their borrowing on short-term borrowing. This was borrowing at commercial banks and flotation of commercial paper in the money market.

The reason for this heavy emphasis on short-term borrowing was that they expected capital market yields to fall in the future, so that they could borrow long on more favorable terms. This expectation, of course, has generally been thwarted. Because of a reduction in their liquidity positions, business firms are almost compelled now to increase their long-term borrowing in order to fund some of their short-term debt. This recent shift in borrowing from the short to the long ends of the debt market, and a decline in total borrowing, has permitted short rates to fall sharply. Because of the recession and some easing by the Federal Reserve, long debt yields have also fallen somewhat.

The current easing of interest rates is expected to continue through most of 1982, though there could be some backing up of interest rates after midyear if the Federal Reserve starts to tighten again. By the end of 1982, the prime rate should be about 10 to 11 percent, which would be roughly half the peak of 1981. Other short term money market yields should also fall sharply. Bond yields and mortgage yields will also decline, but not by as much as money market yields. Still, mortgage rates could be in the 13 to 14 percent range after midyear and around 13 percent by the end of 1982. This would be consistent with a decline in the basic inflation rate and also a decline in the cost of borrowed funds for the financial intermediaries. Most of their funds' cost is tied to yields in the money market, so that these rates should fall.

STIMULUS TO THE ECONOMY

This new emphasis on monetary aggregates, with only a minor direct concern with interest rates is not expected to be abandoned. Nor is the Federal Reserve expected to jettison its new (one-year-old) resolve to fight inflation over a period of more than one year. When the basically strong American economy resumes its growth tendencies, the Federal Reserve will probably start backing away from credit ease. In the meantime, falling interest rates, aided by present easing policies of the Federal Reserve, should start rejuvenating the ailing housing and automobile industries by the spring of 1982. Just as serious declines in sales, output, and employment in these industries, brought on by severe credit restraint led the entire economy into a recession, so falling interest rates should revive these industries' growth rates, which, in turn, should lead the rest of the economy out of the recession and into higher growth rates as well.

Although strong emphasis is on an easing of monetary policy as essential, and likely, to a revival of the sagging economy, one should not neglect the stimulus to the economy of budget policy. The tax cut program of the Reagan Administration has greatly liberalized depreciation allowances and otherwise cut business taxes. This should aid in holding up investment expenditures, even in a recession period. The Economics Department of McGraw-Hill recently released its survey of business plans for capital expenditures in 1982. Such plant and equipment expenditures are expected to rise in dollar amounts by 9.6 percent to $357.86 billion from the $326.63 billion estimated for 1981. However, because plant and equipment prices are also expected to rise about 9.6 percent, spending in real terms should be flat. Thus, although investment spending in real terms will not be rising, it will not be falling either.

The real key to 1982, however, is the consumer. Consumption spending on goods and services represents nearly two-thirds of total gross national product produced each year. So goes the consumer, so goes the economy. Social Security taxes will be increased somewhat on January 1, 1982, which will reduce disposable income (income after taxes) somewhat.

Nevertheless, personal income tax rates are scheduled to be cut 10 percent across the board on July 1, 1982. This could provide considerable stimulus to consumer spending, especially if consumer confidence in the economy is restored.

If consumers feel better about the future, and interest rates have eased enough, they should be willing to increase expenditures not only out of income but also out of borrowing. This could particularly be good news to the consumer-durable industries, such as the auto industry. It is true that such expenditures are postponable, but not indefinitely. Certainly, one could not say about 1981, as has sometimes been said in the past, that consumers have been borrowing from future auto sales in the present. Quite the converse.

The baby boom continues to come of age and to form new households. Marriages and new births of babies are up. In many of these households both of the couples have an income. New or used houses, furniture, and appliances for the home should all be in demand. Demographers tell us we need 2 million housing starts each year. If mortgage rates fall to the 13-14 percent range by next summer, a housing boom should develop by midyear, which could make 1983 a very strong year indeed.

Military spending, especially after midyear 1982, should also be very strong. This should have favorable impacts on California, Arizona, and Texas particularly. Any injection of such spending has a multiplier effect for the entire economy. Furthermore, such defense spending is not sensitive to interest rates, so it need not wait for interest rates to decline to a particular level.

CONCLUSION AND SUMMARY OF OUTLOOK FOR 1982

In summary, and conclusion, the current recession, which began for sure in September of this year is expected to continue through the first two quarters of next year. The current recession, which began like a mild saucer-shaped decline, has turned into the typical v-shaped recession. This means that economic activity continues down sharply, while the unemployment rate rises, until the economy hits bottom, after which it rebounds sharply. The bottom should be in the second quarter of next year and the rebound should become noticeable after midyear.

It should be noted that this expectation of a strong rebound depends importantly upon the course of monetary policy. If the Federal Reserve reverses its recent policy of holding down the rate of growth of the monetary aggregates and actively promotes a higher rate of growth of bank reserves and the money supply, then interest rates should fall enough to induce considerable borrowing and spending. If, however, the Federal Reserve does not promote such a policy of active ease, or backs away from it back to credit restraint quickly, then the recovery could be aborted, as the recovery of 1981 was, after a stong first quarter.

Furthermore, the federal government will borrow even more money from the financial markets next year than this year due to a growing budget deficit. Corporations, too, want to float large amounts of bonds on the capital markets, and households want to borrow large amounts of mortgage money for new houses. If the Federal Reserve is not accommodating, then, of course, interest rates could bounce up quickly by the end of 1982 and economic growth would be slowed somewhat.

For the entire year of 1982, the nation can expect real growth of about 1 percent, which is somewhat less than 1981. The inflation rate, however, should be lower than 1981. It may average about 8 percent in the CPI. Interest rates, too, should average lower than this year. The prime rate could fall to 11 to 12 percent by late 1982, while mortgage rates could fall to 13 to 14 percent at the same time. Such lower interest rates could stimulate considerable borrowing and spending, which would provide substantial economic growth. If inflation can be controlled, the economy could have very strong growth for the rest of the 1980s.

The Arizona Economy in 1982: Year of Decline; Year of Recovery

RICHARD D. WINKELMAN

The year 1981 has been a somewhat unusual year. New economic policies did not generate the positive expectations that were promised as a significant portion of the policy package. Congressional leaders from President Reagan's own party have even been discussing possible reversal of the recent tax legislation. The one consistent policy has been the behavior of the Federal Reserve System, but even here many Republicans are not certain just how strong a stand they wish to take against inflation.

The fact is that 1981 saw the end of the shortest economic recovery period since the end of World War II. On average, economic recoveries have lasted forty eight months, but the one ending in the second quarter or early third quarter of 1981, only lasted twelve months. The national economy is now in a recession that will last through much of the first half of 1982. Signs of recovery will emerge toward midyear, and recovery will be underway by the third quarter. However, the results forecast here for 1982 depend upon the behavior of the national economy as outlined in the national forecast and the reasonable accuracy of the 1981 estimates that are based on eight or nine months of 1981.

KEY INDICATORS

Key indicators are the readily apparent measures of economic well-being and progress. The values of these indicators for selected years are presented in Table 1, and the percentage change in the indicators from year to year are given in Table 2.

The first column of Table 1 reports the actual values of these key indicators in 1979. These 1979 data are presented as a reference point for gauging progress over the two years since 1979. Two columns are shown for 1980; the first is the estimate of 1980, which was based on only the first three quarters of 1980. The numbers in the 1981 forecast column are based on that estimate. The second 1980 column presents what *actually occurred* now that all the data have come in.

Next to the 1981 forecast of a year ago, is a 1981 estimated column. A comparison of the two columns reveals the accuracy or inaccuracy of the last forecast. The last column is the 1982 forecast, which is based on the 1981 estimates, the national economic forecast, and individual analysis and intuition of what will take place in 1982. Table 2 reports the percentage changes in the key indicators.

Continuing population growth reduced unemployment, a lower rate of inflation, and growing retail sales are forecast for Arizona. Manufacturing, wholesale and retail trade, and services continue to be the strong economic sectors for the state. This report was one of the presentations at the annual ASU Economic Forecast Luncheon on December 1, 1981.

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TABLE 1

THE ARIZONA ECONOMY
Value of Key Indicators, 1979-1982

Key Indicators	*1979 Actual*	*1980 Estimated*	*1980 Actual*	*1981 Forecast*	*1981 Estimated*	*1982 Forecast*
Personal income						
Current dollars (000,000)	$20,674	$23,000	$23,521	$26,000	$26,750	$30,250
Per Capita	$ 7,861	$ 8,520	$ 8,653	$ 9,420	$ 9,419	$10,467
1969 dollars (000,000)	$10,500	$10,180	$10,366	$10,280	$10,563	$11,077
Per capita	$ 3,992	$ 3,770	$ 3,814	$ 3,720	$ 3,777	$ 3,833
Population (000)	2,630	2,700	2,718	2,760	2,797	2,890
Unemployment rate (percent)	5.0	6.5	6.7	6.0	6.6	6.25
Metropolitan Phoenix CPI	196.9	226.0	226.9	253.0	249.4	273.1
Retail Sales						
Current dollars (000,000)	$12,741	$13,750	$13,867	$15,500	$15,531	$17,500
1969 dollars (000,000)	$ 6,471	$ 6,080	$ 6,112	$ 6,126	$ 6,227	$ 6,408

Sources: Prepared from data provided by the U.S. Department of Commerce, Arizona Department of Economic Security, and the Bureau of Business and Economic Research, Arizona State University.

TABLE 2

THE ARIZONA ECONOMY
Percentage Rates of Change in Key Indicators
1979-1982

Key Indicators	*1980 Actual* / *1979 Actual*	*1981 Forecast* / *1980 Estimated*	*1981 Estimated* / *1980 Actual*	*1982 Forecast* / *1981 Estimated*
Personal income				
Current dollars	13.8	13.0	12.0	13.0
Per capita	10.1	10.6	8.9	11.1
1969 dollars	(1.3)	1.0	1.9	4.9
Per capita	(4.5)	(1.3)	(1.0)	1.5
Population	3.3	2.2	2.9	3.3
Metropolitan Phoenix CPI	15.2	12.0	9.9	9.5
Retail sales				
Current dollars	8.8	12.7	12.0	12.5
1969 dollars	(5.5)	0.8	1.9	2.9

Source: All percentage rates of change calculated from data in Table 1.

Personal Income

Personal income is an excellent indicator of economic well-being and progress since it is a measure of income earned from all sources plus net transfers, such as Social Security payments, received by Arizona residents. Based on the 1980 estimates, an increase in personal income of 13 percent was forecast for 1981, an increase to $26 billion. However, the data show that personal income has increased to an estimated $26.7 billion—a 12 percent increase over 1980 actual figures. This indicates that the last quarter of 1980 was stronger than expected, which caused actual 1980 income to be greater than what was estimated. This last quarter strength continued through the first half of 1981, and will help in overcoming the second half slowdown. Consequently, dollar figure for 1981 personal income will be greater than forecast, but the percentage change will be less than forecast because 1980 finished on a stronger note than estimated.

The fact that personal income, as measured in current dollars, rose is of little interest because Arizona is part of the fast growth Sun Belt area. It is necessary to correct for population changes, i.e., calculate per capita income and then correct for price changes because part of the rise in total income is simply the result of higher prices. Each of the columns shows per capita income in current dollars. Because of the unexpected strong finish in 1980, per capita income in that year was greater than estimated, the predicted percentage increase in per capita income, 10.6 percent, is greater than the actual increase (8.9 percent) although the forecast and estimated amounts for 1981 are virtually identical. The per capita numbers are identical by pure accident, but the reason that the estimated per capita income isn't greater than the forecast is because the estimated population for 1981 is greater than forecast.

When corrected for price changes, the 1981 estimates of total and per capita personal income are larger than the forecasts for 1981. This suggests that the rate of inflation in 1981 is less than was forecast a year ago. Last year, inflation of 12 percent was forecast for Arizona, but the actual rate of inflation will be a bit less than 10 percent. Consequently, personal income in real terms rose by almost 2 percent compared to the 1 percent forecast. Per capita income, in 1969 dollars, was forecast to show a 1.3 percent decline but the actual decline will be 1 percent. According to the data, 1981 will be the third consecutive year in which per capita personal income will have declined. The corrections for population and inflation demonstrate that the Arizona economy in 1981 was better than anticipated and shows the relative well-being of an economy highly dependent on high technology.

For 1982, the personal income outlook is very optimistic considering that the first half of 1982 will be one of minimal advance with most of the gain coming in the second half. Personal income in current dollars is expected to rise 13 percent over the 1981 estimate. This will result in a total personal income of $30.25 billion. When the population change is taken into account, per capita income will rise by over 11 percent to $10,470. Some slight progress is expected in the battle against inflation. Consequently, personal income in constant, 1969 dollars will increase by 4.9 percent and, for the first time since 1979, per capita income in constant dollars will show a positive increase of 1.5 percent.

Population

Population growth at a rate greater than that of the nation as a whole and commensurate with that of the rest of the Sun Belt has long been an important feature of Arizona's economic progress. Much of the state's population growth is the result of net migration, which follows the business cycle. Inmigration is greater during upturns than it is during downturns. By looking at Table 2 it is clear that actual population growth was less in 1981 than in 1980, but the rate will rise once again in 1982. Population will reach the level of approximately 2.9 million next year, a growth of 3.3 percent. This has some interesting implications for the overall economy and housing in particular.

Unemployment Rate

The traditional way which we measure how well the economic system is performing is the unemployment rate. Over the past year the Arizona economy has had an unemployment rate considerably less than that of the nation as a whole. Unemployment averaged about 6.6 percent in 1981, quite a bit higher than the 6.0 forecast. Much of the difference can be explained by the greater growth in population and the labor force than was expected. This helps to explain why the overall Arizona economy appears to have done so well but still have a higher than anticipated unemployment rate. In 1982, the average unemployment rate will be less than it was in 1981, with monthly rates in the neighborhood of 6.5 to 6.8 percent in the early months, but much lower in the second half of the year. Over twelve months, the average rate of unemployment will be in the range of 6.1 to 6.4 percent.

Phoenix Consumer Price Index

A very important feature of 1981 was the performance of price indexes, which indicate that the upward spiral of prices is beginning to moderate. This is the result of the tight monetary policy exercised by the Federal Reserve System and the current economic recession. The Phoenix Consumer Price Index was expected to increase by 12 percent in 1981 over 1980, but the data suggest that the local price index will rise by less than 10 percent. Although still high, this represents significant relief from the 15 percent increase of 1980. The forecast index value for 1981 is 253.0 whereas the actual value for 1981 will be slightly less than 250. This has contributed to the unexpectedly better performance of total and per capita real personal income. Inflation in the national economy has also slowed down and will remain below the rate achieved locally. Next year, the Metropolitan Phoenix Consumer Price Index is expected to reach the level of 273, an increase of approximately 9.5 percent. The rate of inflation is expected to be that high because of the anticipation of some monetary loosening by the second half of 1982 to help spur economic recovery, especially in the construction industry.

Retail Sales

Retail sales are a function of personal income, and the level of sales greatly influences the level of employment in the wholesale and retail trade sectors. Retail sales have grown steadily in current dollar terms but not in constant (real) dollars when corrected for inflation. In 1980, real retail sales actually declined but increased in 1981 by almost 2 percent. In 1982, retail sales are expected to increase 12.5 percent in current dollars to $17.5 billion. With anticipated inflation of 9.5 percent this will translate to a 2.9 percent increase in real terms with the bulk of this gain occurring in the second half of the year. (Paul Jones of Valley National Bank reports later in this issue of *Arizona Business* on consumer attitudes).

ECONOMIC SECTORS

This section of the forecast report presents capsule commentaries on major employment sectors of the Arizona economy.

Agriculture

Agriculture remains a strong force in the Arizona economy, but cotton growers are currently suffering from a significant fall in price from a year ago. Citrus growers, however, should benefit from the problems of California growers. Employment in agriculture remains stable, but will tend to decline as mechanization improves.

Mining

Copper mining was a bright spot in the economic picture this year with employment more than doubling from a year ago. This has occurred in spite of the problems of the automotive and construction sectors of the national economy. Since it will be later in the year before these sectors begin to show improvement, the outlook for the copper mining sector remains clouded. We can hope that it will be able to maintain the current level of employment through the first half of 1982 and possibly expand in the latter part of the year.

Manufacturing

This continues to be a strong sector of the economy with employment currently at 158,000. It is not likely to be greater than this in 1981 because of the current slowdown. The manufacturing sector is led by several high technology industries which should benefit from the current emphasis on national defense by the Reagan administration. Employment by the end of 1982 will reach approximately 168,000 in the manufacturing sector. (B. Paul Barnes of Talley Industries presents an in-depth survey of the manufacturing sector later in this issue of *Arizona Business*).

Tourism

General tourist expenditures increased in 1981 as the general economy was in a mild expansion over the winter season. The outlook for 1982 is somewhat dimmer, however, as the national economy will be in the full grip of economic recession during the height of the season. Tourism will not decline, but will not experience a major expansion either.

Construction

This sector of the Arizona economy continues to decline as 1981 winds down—the victim of recession and historically high interest rates. Employment has declined by 7,000 from a year ago, a decline that will continue through the early part of 1982. As the national economy recovers and interest rates are more "reasonable" for construction purposes, this sector of the economy will begin to improve with the real possibility of a boom in 1983. Employment in construction is likely to reach 75,000 by the end of 1982. (Clark Cederlof of Western Savings provides more detail on residential construction later in this issue of *Arizona Business*).

Transportation, Communication, and Public Utilities

This sector grows steadily but slowly with the general population and will continue to do so as long as there is no major economic downturn in the state. Employment now stands at 51,000 and will reach 52,500 by the end of 1982.

Wholesale and Retail Trades

This is the largest sector in the Arizona economy with respect to employment, with close to one-fourth of all nonagricultural jobs. This sector grows directly with population and income. Employment now is about 245,000. By the end of 1982, employment will probably reach about 252,000.

Finance, Insurance, and Real Estate

This sector continues to expand through booms and slower periods of growth. Employment is 3,000 more than a year ago and should grow by a similar amount over 1982, reaching 63,000 by the end of the year.

Services

This sector is the one tied most directly to tourism for many of its jobs. Services follow only the trade sector in total employment. There are 208,000 employed in this sector now and by the end of 1982, there will be approximately 211,000 people employed.

Government

This is one sector of the Arizona economy that has not grown; in fact, its employment has declined, mainly in state government and school districts. The latter is explained by changing demographics and accompanying school closures. Total employment by government is close to 200,000 and will likely stay near that level over 1982.

SUMMARY

The Arizona economy is experiencing a slowdown while the nation's economy experiences a recession. The year just ending was not as bad since most indicators gained. Next year will see significant improvement as all indicators show positive gains. The bulk of the gains will not occur, however, until the second half of 1982 as the present slowdown continues through the first half. All in all, 1982 is a year to which we can look forward.

Economic Trends for 1982

FOUR VIEWS OF THE FUTURE

THE ARIZONA CONSUMER

B. Paul Jones
Senior Vice President and Manager
Investment and Economic Planning Group
Valley National Bank

The consumer plays a vital role in determining business trends. Consumer spending accounts for two-thirds of all economic activity. The major economic factors affecting the consumer, and the response to those factors, are critical.

At this time, the economy is in recession. Business activity has slumped sharply in recent weeks, after showing no real continuing progress for a number of quarters. Total employment is relatively stagnant. Job opportunities are not readily available. Conversely, unemployment is rising nationally and in the state. The values of assets owned by consumers have eroded. The stock market has declined during the course of the year. Until just recently, bond prices have fallen precipitously. Liquidity of houses is much diminished, and housing prices have shown some decline.

Yet, several positive factors exist. For the better part of two years consumers have seen improved ability to service their debts. The ratio of installment debt to income has improved markedly over the past eighteen months.

Inflation has moderated significantly throughout the year 1981. No longer are we seeing consumer prices increase at rates of nearly 20 percent. Today price increases are being measured in single digits, and further improvement seems likely.

Rising tax burdens were ameliorated on October 1, when the first 5 percent installment of the personal tax cut became effective. On July 1, 1982, the second 10 percent federal income tax reduction will become effective. It will be far more meaningful than the one just received.

Although unemployment is a growing problem, those who are working are seeing increases in hourly compensation at rates that exceed the combination of tax and price increases. The improvement in real incomes available for spending should continue. Those who are retired began receiving higher social security payments on July 1. Another increase will become effective on July 1, 1982.

Although interest rates are still high by historical standards, they have declined materially. With the

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During the annual Economic Forecast Luncheon presented by Arizona State University, four prominent experts expressed their views on various issues facing the economy during 1982.

This article presents the remarks of the four participants who addressed concerns related to the consumer, the housing industry, and the manufacturing industry, plus two issues of special concern for the future—oil prices and inflation.

economy in recession, further declines in rates are possible. In the banking system, reserves available for lending have improved significantly since the summer months. The initial impact was to cause interest rates to fall. In 1982 banks are likely to be more aggressive in seeking loans. Consumer loans are likely to be more readily available to finance larger purchases.

To obtain regular readings from the consumer in Arizona, the Valley National Bank commissions the Behavior Research Center to conduct a quarterly survey. The survey results reveal consumer views on the economy and consumer intentions to buy durable goods. The October, 1981, survey indicates some dampening of the optimism that local consumers expressed in July.

The Arizona Consumer Confidence Index (Table 1) declined 17 percent from July to October, after a 17 percent upward shift between April and July. Consumer confidence is currently at about the same level it was at in early 1981. In a similar trend, the Conference Board's U.S. Consumer Confidence Index dropped 15 percent from July to October. These Consumer Confidence Indexes measure (1) perception of job availability, (2) family income expectations, and (3) perception of the condition of the national economy. The decreased confidence level of Arizona consumers reflects the belief that fewer jobs are available today relative to six months ago. Arizonans believe that fewer jobs will be available six months hence. Phoenicians are more pessimistic than Tucsonans.

Arizona consumers are also less optimistic than they were the previous quarter about improvement in the state of the national economy. Only 21 percent think that the U.S. economy is stronger relative to six months ago, down from 30 percent last quarter. However, the survey respondents are still more optimistic than they were in January and April, 1981, when only 6 percent and 14 percent, respectively, felt that the national economy had improved.

The survey also showed that most consumers experienced little change in their financial situation over the last twelve months. Yet, respondents are slightly more optimistic concerning their family financial situation a year from now. More than half expect some improvement in family income over the next twelve months.

While Arizona consumers may not be as optimistic as they were last quarter, they are as positive today as they were at this time last year.

Consumer intentions to buy durable goods over the next six months declined somewhat from the record high level that was set only three months earlier. The Arizona Planned Buying Index, after three consecutive quarters of improved readings, fell 14 percent. However, the current index reading of 201 is the third largest recorded since 1972. Sixty-one percent of Arizona households plan to purchase durable goods over the next six months, compared with 64 percent last quarter, and 48 percent a year ago.

TABLE 1

CONSUMER CONFIDENCE INDEX

	Arizona	*National*
April, 1976	82	82
November, 1976	80	79
January, 1977	81	91
April, 1977	80	85
July, 1977	86	89
October, 1977	64	87
January, 1978	77	105
April, 1978	71	97
July, 1978	68	89
October, 1978	70	95
January, 1979	64	94
April, 1979	60	82
July, 1979	53	67
October, 1979	55	86
January, 1980	52	79
April, 1980	36	53
July, 1980	52	59
October, 1980	60	80
January, 1981	58	68
April, 1981	58	76
July, 1981	68	81
October, 1981	57	NA

Sources: Arizona data from a survey by the Behavior Research Center; national data from the Conference Board.

Consumer buying plans are stronger for some types of durable goods than for others, but all categories were recorded at lower levels of planned buying compared with the previous quarter. The largest drops in planned buying were in White Goods and Home Improvements.

Consumer attitudes and buying intentions are generally manifested in retail sales activity. In 1981, the durable goods buying intentions of Arizona consumers have been stronger than the previous year's spending plans. Retail sales show a growth of 10.4 percent in the first eight months of 1981—about the same growth in current dollars that was recorded last year. But, in real terms, adjusted for price change, the current retail sales trend is stronger than it was in 1980. With continued lower inflation and reduced tax burdens, retail sales should pick up further by year-end.

TABLE 2

ARIZONA CONSUMER PURCHASING INTENTIONS

Durable Goods	*Percentage of Households Planning to Buy Over the Next Six Months, as of* Oct. 1980	July 1981	Oct. 1981
White Goods[a]	24	50	25
Brown Goods[b]	20	42	38
Household Goods	33	49	48
Home Improvement	20	41	31
Automotive	19	35	32
Home Buying	9	9	7

[a] White goods include washers, dryers, dishwashers, refrigerators, freezers, ranges, ovens, water heaters, water softeners, and disposals.

[b] Brown goods include television sets, audio equipment, sewing machines, power tools, and musical instruments.

Source: Survey by the Behavior Research Center commissioned by Valley National Bank.

In 1982 the Arizona consumer, by attitudes, buying intentions, and actions, may be expected to spend carefully and to manage debt cautiously. Within this context, households are likely to leverage their improved real incomes by borrowing to acquire consumer durables and to improve their homes.

Unlike the atypical pattern of 1980, when consumer credit declined, consumer credit is growing. Consumer credit at the Valley National Bank, a good proxy for the state as a whole, rose to $1.305 billion in the third quarter of 1981. This represents a 4.3 percent increase over the $1.251 billion in the second quarter, and a 15 percent gain above the depressed level of $1.133 billion in the third quarter of 1980.

As we emerge from the recession to more favorable business conditions in 1982, the scheduled tax cuts should be accompanied by improved employment opportunities and rising incomes. This should provide the basis for increasing gains in retail sales as the year progresses.

With the Planned Buying Index at the third highest level since 1972, Arizona consumers are reflecting the inherent optimism of our growth state. Thus, they are influenced by the current discouraging news, but reflecting willingness to plan for a more favorable period ahead. Once again, the Arizona consumers and the Arizona economy should outperform the nation as a whole.

HOUSING AND REAL ESTATE

Clark Cederlof
Executive Vice President
Western Savings

Real estate and housing continue to be an important part of the fabric of the economy of Arizona. Because of the shifts of population from the Northeast to the Southwest and because of continued growth in our employment base, housing is an essential element in the economic viability of our state.

A historical overview suggests some of its impact (Table 3). In 1975 at the bottom of the last economic cycle, only 10,000 permits were taken out in Maricopa County and 4,000 permits in Pima County. This contrasts with the 1978 high in Maricopa County of 43,000 permits and 11,000 permits in Pima County. The ripple effect of a fourfold increase in building activity causes substantial impact on our community through all of the factors involved in the production of housing from materials and labor through real estate sales.

This community is currently experiencing a recession in the housing sector. The level of building permits, which for 1981 will run approximately 22,000 in Maricopa County and just over 5,000 in Pima County, represents less than half of the housing permits at the recent peak of 1978. In spite of the fact that there are substantial problems in the housing industry, overall wage and salary employment is not down substantially. Unemployment, as a percent of the labor force, continues to be healthy at 5.2 percent. This reasonable health of the Arizona economy provides an excellent springboard for housing recovery should interest rates fall to levels that are acceptable to the consumer.

Interest rates, as measured by almost any index, have fallen substantially since early October. As these rates continue to fall, it is expected that savings and loans and other real estate lenders will become reliquified through additional savings while, at the same time, be able to offer lower interest rates on mortgages to those wishing to purchase homes. Our best estimate is that money market certificates will fall to 9 percent by April of 1982 and then back up to 10 percent by December, 1982. The long-term mortgage rate may well reach 13 percent by April but climb back to 14 percent by year end 1982. Rates at these levels will certainly provide a catalyst for a rebound in housing, both with respect to new construction and sales of existing houses. 1982 should see construction permit levels of 11,000 to 20,000 in Maricopa County and 3,800 to 6,300 in Pima County.

TABLE 3

ARIZONA HOUSING FORECAST

Building Permits, Maricopa County	*Single Family*	*Townhouses and Condominiums*	*Multifamily*	*Total*
1975	8,705	409	845	9,959
1978	28,851	3,467	11,119	43,437
1981	10,200	4,000	8,000	22,200
1982	5,000 - 10,000	1,000 - 2,000	5,000 - 8,000	11,000 - 20,000
Building Permits, Pima County				
1975	2,326	347	1,274	3,947
1978	5,351	1,759	3,829	10,934
1981	2,000	1,000	2,190	5,100
1982	1,500 - 2,500	800 - 1,100	1,500 - 2,700	3,800 - 6,300
Percentage Vacant				
1981	2	6	6	—
1982	1	5	7	—
Number Vacant				
1981	7,350	2,750	7,350	—
1982	4,500	2,600	9,800	—

Selected Interest Rates	*December 1981*	*April 1982*	*December 1982*
Prime Rate	14.0	11.0	12.0
Mortgage Rate	17.0	13.0	14.0
Money Market Certificates	11.8	9.0	10.0

Note: Figures for 1981 and 1982 are estimated.
Source: Clark Cederlof, Executive Vice President, Western Savings.

Unlike most years, there is tremendous volatility in the economy. The rate at which new dwellings are built depends on how rapidly rates fall and how difficult it is to restart the housing industry. The lots are available, but many builders may have difficulty regaining their former momentum.

Of immediate interest are the vacancy ratios represented by the most recent studies. Single-family units at 2 percent vacancy are double the historical average of 1 percent and now stand at 7,350 units. The townhouses at 2,750 is not an alarming number but needs to be watched carefully. The multifamily vacancy of 7,350 units is down from 9,300 the previous quarter and should continue to improve. However, recent Industrial Development Authority proposals for apartments could result in substantial increases in the number of apartments vacant in both Pima and Maricopa Countys. It appears, in total, that about 24,000 units will be absorbed in Maricopa County during 1981. It must be kept in mind that this is the result of a viable market early in the year with slow absorption down to approximately 4,800 units in the fourth quarter.

In comparing current housing activity with that of 1975, which was a similar year in terms of the business and economic cycle, it is interesting to note that there have been substantial shifts of our townhouse and condominium units and our multiple housing units to the outlying areas. The proportion of single-family homes in these areas which include Glendale, Scottsdale, Tempe and Mesa has declined as a percentage of the total. The overall percentage of housing units including condominiums, townhouses, and apartments is up substantially. This simply means that because of employment opportunities, shopping centers, etc. in these outlying areas, people are electing to live and work in the suburbs outside of the core area of Phoenix. There is no question that these cities will continue to grow and will have a large employment basis and other big city activities. Continue to look for a substantial proportion of the growth to take place in these communities.

Overlying the recovery in housing are some problems and concepts that have not been associated with any previous recoveries. The first of these is the new adjustable mortgage loan which will be offered on an almost exclusive basis. It is unikely that savings and loans, banks, and other lenders will, at any time in the near future, be involved in fixed-rate, long-term mortgages unless they have a premium price. They simply cannot take the interest rate risk associated with such instruments in an economy, which in all probability, will have substantial ups and downs in interest rates.

Second, it is likely that either through state legislation or federal regulation the "due on sale" clause will become much more of a factor. This is the contract agreement contained within mortgage instruments, which allows the lender to adjust the rates at the time the property is sold. Third, a possible hidden problem is that of the numbers of properties sold in the last two or three years, which contain various kinds of accelerated provisions commonly known as "bullet" loans. Often, sellers or others have carry-back financing on properties, and this carry-back financing becomes due in the next year or two. The owners of properties with such financing will be looking to institutional lenders in order to pay off the creative financing that was a part of a previous sale transaction. The result of this demand on the financing institutions, together with the demand for new housing starts, may result in interest rates remaining at a higher level than one would normally expect. Observers have traditionally seen a two to three percent spread between the rate of inflation as measured by the Consumer Price Index and the long-term, fixed-rate mortgage. This two or three percent spread is expected to become more like five or six percent, and the interest rate contracted for will be adjustable through being tied to some index such as the cost of funds or the Treasury bill rate.

Finally, lenders are increasingly going to look to the joint ventures with builders as a way to bridge their interest rate risk. Industrial and office space availability are both somewhat soft with 4,000,000 and 12,000,000 square feet available respectively. That means an 18 percent vacancy in industrial space and 14 percent vacancy in the office sector. That is up somewhat from 1980 levels but relative to the economy and the rest of the nation is quite good. Construction of new facilities is down, and is fair, so an improvement in the occupancy levels during 1982 would be expected.

In summary then, 1982 should be a transitional year that bridges a time of recession and initiates the beginning of a new business expansion. The early part of the year should be sluggish; in many ways, similar to the third and fourth quarters of 1981. But as the year progresses, housing activity in all sectors should improve as interest rates reach levels of approximately 13 percent. Home buyers will be drawn into the market anticipating that rates at this level represent an acceptable risk for them. Their choice will then be which adjustable-rate mortgage to adopt or, perhaps accept a higher priced fixed-rate mortgage.

The following years—1982, 1983, and thereafter—will see new relationships as borrowers and lenders alike adapt to adjustable-rate mortgages, and builders and lenders learn to live with various types of joint venture arrangements. The rapidity with which the recovery takes place seems to be tied to how quickly interest rates fall to levels that promote housing recovery.

ARIZONA'S MANUFACTURING OUTLOOK FOR 1982

B. Paul Barnes
Director
Talley Industries, Inc.

Over the past several years people have followed with interest the manufacturing surveys that were conducted first by Jack Marinick of Garrett, and then by John Welty of Motorola in preparation for the annual economic forecast. These surveys are rather unique: They generate numbers and predictions not available elsewhere, and they are a fairly reliable indicator of what will subsequently transpire in the state's industrial community in the coming year.

The forecast statistics presented here are the result of a confidential survey of twenty-six of the largest industrial employers in the state. That is an increase of six companies over the number surveyed in previous years. Since manufacturing has consistently grown in size and stature throughout the 1970s, it seemed appropriate to increase the base of the sample. As a reflection of the fact that electronics is by far the largest segment in the total manufacturing activity, exactly half of the companies surveyed are producers of electronic components, equipment, or systems.

From all indications, Arizona's manufacturing community continued to enhance its position in 1981 as the fastest growing segment of the state's economy. In all of the important measurements—sales, backlog, employment, and foreign exports—the companies surveyed achieved healthy gains this year as a group, although the growth rate in most cases was somewhat less spectacular than it has been in several previous years. The growth in backlog, employment, and exports was less than the companies themselves predicted when this survey was taken late last year, but their shipments or sales predictions were on target.

In the area of shipments or sales, the companies surveyed last year predicted that sales this year would increase approximately 10 percent over the $4.7 billion shipped last year. This year's survey indicates they are shipping about $5.13 billion, for an increase of 10.4 percent.

In the order backlog category, the respondents were not nearly as accurate. Last year they predicted that backlogs would increase by more than 20 percent this year, and it now appears that they are actually growing by about 12 percent. The manufacturing backlogs were $3.4 billion at the end of last year, and they will be on the order of $3.9 billion at the end of this year. The important thing to remember, however, is that the backlog has indeed grown by a respectable amount, and that bodes well for the manufacturing industry in general as the new year begins.

In terms of local employment, the companies surveyed now have a total of 60,514 workers—up by 5.7 percent from the level of late last year. Very few industries, either locally or nationally, can report any kind of employment increase this year, so that achievement is notable, even though the growth was less than the 9 percent growth anticipated by our industry for this year.

Again, the electronics industry is a large factor here. While three or four companies have experienced minor employment cutbacks earlier this year, they are being offset by the continuing influx of new electronics companies into the state and the generation of many new small companies that did not exist before.

Someone in the electronics business has said, "If two engineers have a good idea and $100 between them, they'll start a new company in their garage." Quite a bit of that seems to be going on, and that is a good omen for Arizona's long-term economic growth prospects.

In the area of foreign exports, the pattern is very much the same. While the companies surveyed last year believed their exports would increase about 8 percent this year, the actual growth is about 2 percent. Exports increased from about $1.04 billion last year to about $1.06 billion this year. This reflects, of course, the continuing deep recession in most of the countries in Western Europe and the adverse affect that the strengthening U.S. dollar in most foreign markets has had on our export revenues.

As for 1982, the state's manufacturing industry is anticipating that it will be another growth year. Table 1 shows the data obtained through the survey.

TABLE 1

ECONOMIC FORECAST SURVEY OF
MAJOR MANUFACTURERS
December, 1981

	1981 Actual (000,000)	*1981 Percentage Change Over 1980*	*1982 Percentage Change Over 1981*
Shipments/Sales	$ 5,132.0	10.4	13.1
Sales Backlog	$ 3,931.6	11.7	15.5
Employment	$60,514.0	5.7	8.0
Foreign Exports	$ 1,057.9	2.0	10.2

Source: Survey of twenty-six Arizona manufacturers.

In shipments or sales, the industry anticipates an increase of about 13 percent. In backlog, the increase should be near 15.5 percent. Employment expects the least growth—about 8 percent. This reflects the continuing and growing emphasis being placed by the large employers on productivity improvements through employee motivation programs, and through a higher degree of automation in the manufacturing process. It may well be that in the future much of the employment growth will be accounted for by new companies entering the community, or new home-grown companies, and less by the very large manufacturers, as has been the case in the past. Finally, in foreign exports, an increase is expected next year on the order of 10.2 percent.

It is necessary, however, to include a large caveat as a footnote to these projected growth figures. In the past couple of surveys, many companies indicated that they were cautiously optimistic about their prospects for the coming year. This year, many companies indicated they were being more cautious and less optimistic than they were in previous surveys, and that their optimism is declining with each passing month.

The statistics related here were gathered in late 1981 and are based on an economic scenario that calls for the first half of 1982 to be at best "flat" for the state's manufacturing industry, and for the second half of the year to be a period of resumed growth, with each month or quarter being better than the one that preceded it.

Since that time, however, the economic scenario has grown darker. Government economists are now beginning to agree that things will get worse before they get better, and that President Reagan's cure for our economic ills will take longer than originally anticipated. That means that our anticipated "flat" first half could be down instead, and that we might see little or no growth for the second half. Several large employers are beginning to believe that the fourth quarter of 1981 will not be as good as the third quarter, which itself was not very good, and that the outlook for the first quarter of 1982 is growing bleaker by the day.

Until now, the continuing recession has left Arizona's manufacturing industry relatively unscathed. But if things really do get worse before they get better for the U.S. economy in general, then these projections are extremely optimistic, and the industry will indeed be fortunate if next year's performance is only equal to this year's.

Longer term, of course, the manufacturers continue to be highly optimistic about the important role that manufacturing will play in Arizona's economic future. Electronics continues to be a growing keystone in our economic base, and the projections are that this industry alone will experience above average growth for at least the rest of this century. None of us have any doubt that Arizona will continue to grow as one of the most important electronics centers of the United States—indeed, of the world—and that our collective future is even brighter than it has been over the past two decades.

While Arizona continues to be a very attractive place for the manufacturing industry, the survey also indicates that companies are becoming increasingly concerned with a number of local issues that, if left unresolved, could have a restrictive influence on the local companies' ability to keep growing here, and on the continuing attraction of new companies.

One of these concerns is the skyrocketing increase in medical costs, and the uncoordinated, duplicative medical services that are causing our health costs to grow at a rate two to three times higher than the current inflation level. This is becoming a critical problem, and one that requires the immediate attention and cooperative effort of government, industry, and the health service purveyors themselves.

Another concern centers on the issue of hazardous waste disposal. The manufacturers are all looking for a well-developed but speedy solution to this growing problem. Modern industry, and especially the high technology industry, does generate hazardous wastes, and it is imperative that an agreeable, in-state solution be found and put into effect, so that people can continue to enjoy the healthful lifestyle, free of hazardous risks, that they have come to appreciate here in Arizona.

Finally, the manufacturing industry is having increasing difficulties in locating, attracting, and retaining qualified technical people. These people are the lifeblood of the organizations, and without them, the firms will stagnate and eventually succumb. The "Center of Excellence" program instituted in the Arizona State University College of Engineering a year ago is a major step in the right direction, and all of our engineering-oriented companies are deeply involved in helping to make it a success. Firms are now also becoming involved at the junior college level, and that's a good sign too. There is no reason why the state can't "home grow" more of the people needed by local industry, rather than import more and more of them from other parts of the country, which is obviously a very expensive proposition. The industry is pleased with the spirit of cooperation that exists between government, industry, and education today and hope it continues to expand in the future.

TWO ISSUES FOR THE AMERICAN ECONOMY

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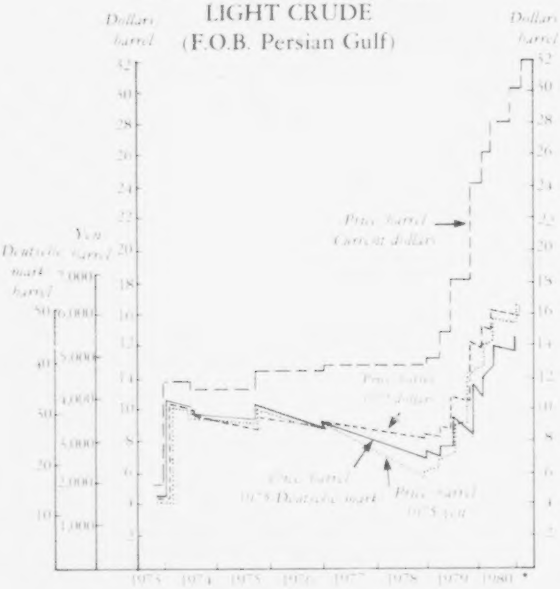
Oil Prices

In July, 1980, an article by this author and his colleague William Brown in *Fortune* magazine discussed what was called the "coming glut" in oil.[1] Last week a second article was published by Brown on why the glut is probably permanent.[2] The first article prompted this writer to wager that the world price of oil in fixed dollars would be less a year from that date, five years and even ten, twenty, forty, or eighty years from then. The following discussion explains the reasoning behind the "five-years" wager.

Figure 1 shows the graph of oil prices in fixed and current dollars, fixed yen, and fixed Deutsche mark. That graph shows that a genuine rise in the price of oil (by a

FIGURE I
PRICE OF SAUDI ARABIAN LIGHT CRUDE
(F.O.B. Persian Gulf)



*1980 figures assume 4 percent annual inflation for both Germany and Japan

Source: Data from *Petroleum Economist* as compiled by William Brown. Graph from Herman Kahn, *New Initiatives for America* (Croton-on-Hudson, N.Y.: Hudson Institute, 1981).

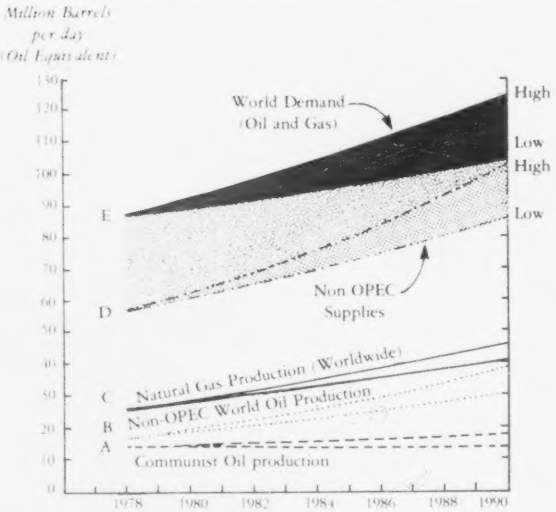
factor of four) occurred in 1973. Yet, from January 1, 1974 to about the end of 1978, the world price of oil actually went down 25 percent in fixed dollars, down 40 percent in fixed Deutsche mark, and down 50 percent in fixed yen.

Every time the price of oil was raised during that five-year period, the news reports failed to mention that the price was rising by less than inflation, thus giving a misleading impression. OPEC is not a true cartel, but is essentially a price leadership and has a relatively mild influence on the price of oil. The price is basically determined by supply and demand, and that includes the big price increase of 1973. What happened at that time was that the Arab nations did not make a serious embargo because they were afraid to do so. But the demand almost tripled because of panic stockpiling—in fact more than tripled—and it was the demand that drove up the price until the storage capacity was filled by almost mid-1974. By that time the OPEC nations had made so much money that they were relaxed about putting oil on the market. But even the mild competition drove the price down. Similarly in 1979 and 1980, Iran had a revolution and later Iran and Iraq went to war; people thought that the delivery of oil would go down. In fact, it went up, not down. But the demand went up enormously, and that drove the price up again.

Figure II shows some scenarios for the future price of oil. In scenario one, imagine that the production of oil goes up about 2 percent a year in the Communist countries, production of non-OPEC oil goes up approximately 7 percent, and the world production of gas goes up by 5 percent (in most countries gas and oil are interchangeable). Adding them together gives the top line in the graph. Imagine also that the demand for oil plus gas goes up only by 1.5 percent a year. In that case, the difference is supplied by OPEC (dotted line), and if this continued for a decade, OPEC would be selling *zero* oil by 1990. No matter how good a cartel they are, they cannot maintain the price. It has to collapse in the mid-1980s.

Now take a more pessimistic scenario where the production of Communist oil is up by zero percent, non-OPEC oil by 5 percent, gas by 4 percent, and demand goes up by 2.5 percent. Then OPEC supplies about 22 or 23 million barrels a day, and the price goes up. Either situation is conceivable, but the first is much more likely.

FIGURE II
PROJECTIONS OF INTERNATIONAL DEMAND AND SUPPLIES OF PETROLEUM AND NATURAL GAS



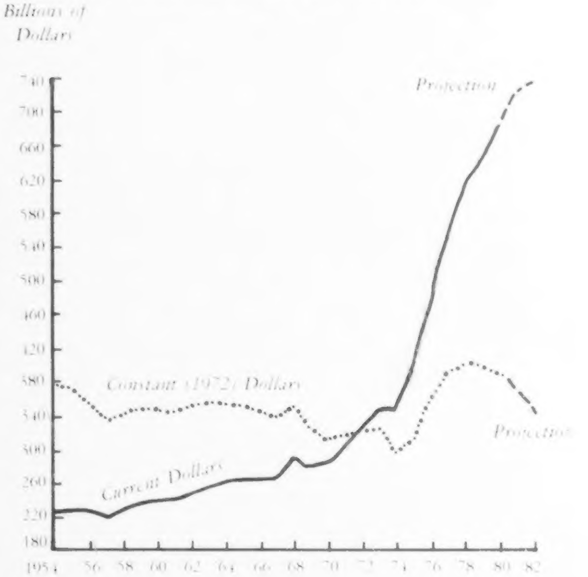
Notes: A 0-2 percent
B 5-7 percent
C 4-5 percent
E 1.5-2.5 percent
D = A + B + C
E-D = Required OPEC Supplies

Source: Herman Kahn, *New Initiatives for America* (Croton-on-Hudson, N.Y.: Hudson Institute, 1981).

Inflation

Another important issue for the American economy is inflation. The bottom curve of Figure III shows the national debt of the United States in current and fixed dollars. Most people assume that the national debt has soared, but this is not true. In fixed dollars, we do not owe any more today than we owed twenty-five years ago. That means that on the average there has been no deficit for twenty-five years. If you go into deficit, the amount you owe goes up; that is what ismeant by deficit. Yet that sounds contradictory to popular assumption. What is the explanation?

FIGURE III
NET FEDERAL DEBT, 1954-1982
(Current Dollars and 1972 Dollars)



Source: Herman Kahn, *New Initiatives for America* (Croton-on-Hudson, N.Y.: Hudson Institute, 1981).

Take 1980 as a good year. In 1980 the average (nominal) interest on the U.S. debt was 10 percent. Inflation measured by the GNP deflator was 11 percent, and 14 percent as measured by the CPI. We will take the GNP figure to be conservative. The real interest, when the nominal interest is 10 percent and inflation is 11 percent, is minus 1 percent. But there was $85 billion in the budget that year to pay for interest. How can you pay for interest if it is minus 1 percent? The answer is: that it is not paying for interest; it is paying on principle. It is making up to the bond holder for the fact that the purchasing power of the bond is going down. And the fact that we tax interest as income is just adding insult to injury.

In the last twenty-one years, the total amount of funds that flow through all levels of government—federal, state, and local—has varied between 30 and 35 percent of the GNP. At the moment it is about 32 percent and going down. In Europe, twenty years ago, it was around 30 to 35 percent; today it is around 50 to 65 percent. In other words—going up. Europe may be in serious trouble during the next decade, because it is putting too much money through the government.

This does not mean that we should not cut the budget. But the problem in the United States is not that we have been borrowing so much money, because we have not in real terms. And it is not that our expenses have been soaring.

Looking at the U.S. budget problem today—the stagnation-inflation-deficit circle—it is not the deficit that caused the inflation; it is inflation that caused the deficit, because inflation caused the high interest rates, and without the high interest rates we would not have the problem. It is really a cash flow problem.

When you repeatedly borrow money and pay it back, it is called "rollover" not "deficit." The problem with the United States is that there is too much rollover at the moment. The U.S. debt used to have a nine to ten year maturity. Now it has nominally a three and one-half year maturity, but actually more like two years because the inflation is also paying off the debt. Certainly one cannot operate at a trillion dollar debt, rolling it over every two years.

The first point is how to finance the deficit; basically, there are two ways: One can finance it through the Federal Reserve Board, which is the same as printing money, and that is inflationary; or one can borrow the money from the general public, which in these circumstances wants very high interest rates, in part because it wants to be protected from inflation and because of the supply and demand for credit, which is a more or less separate force from inflation. As a result, interest rates soar. This is called a tight money policy and it can create a lot of bankruptcies and unemployment.

Imagine walking down a very narrow road, and on one side is a forest fire and on the other side is a ten-thousand foot drop. The drop corresponds to a hyper-inflation; the forest fire corresponds to an excessive recession/depression. There is no question but that one should lean into the forest fire. But for various reasons people vacillate at that point and that is what they are doing now—maybe.

For the last five recessions the Federal Reserve Board has promised to have a tight money policy through the recession and not let up on tight money until the inflation is cured. Under normal circumstances, there is about an 18 month lag between changes in money policy, and changes in inflation. If the tight money policy is too painful, they relax it. The relaxation does not help much during the recession, because it takes time for the economy to react (but we no longer know how much time) and by the time the recession is over, inflation is back again. Yet, they are already talking now about relaxing the money policy again because they are afraid of a catastrophic recession, and they do not like the idea of a recession around Congressional elections.

The second point is that the big deficit problem can be solved in two separate ways. The first is more taxes next year: say $10 on every barrel of oil imported, this brings in about $20 billion a year; decontrol gas and put on a tax of $2 a thousand cubic feet; this will bring $10 to $20 billion a year; and then a tax on cigarettes and liquor could bring in still more revenue. And all three taxes are politically possible to pass.

What would be best, however, is more sensible financing. This second solution is to index the principle on the national debt. Take a normal $1,000 bond at 3 percent ($30 a year interest). (From the years 1800 to 1955 the U.S. government was able to borrow money at roughly 2 percent.) These days, however, nobody is going to lend money at that rate because they are afraid of inflation, so they set the interest rate higher to account for inflation. If they index the interest and inflation is 10 percent, the $30 interest goes up to 13 percent ($130) and a person cannot initially afford it. If they index the principle, the $1,000 goes up to $1,100—it is still the same as $1,000 in constant dollars—and the interest goes to $33 (3 percent of $1,100) because the interest rate remains at 3 percent. And a person can afford the cash flow. The same theory applies to mortgages.

Take the Alaskan pipeline. In order to finance the Alaskan pipeline, they have to charge $10 for 1,000 cubic feet of gas. Now it is true that they think in terms of 10 percent inflation for the rest of history, and that means that thrity years from now that will be only 50 cents (1,000 feet would be a bargain). Instead, sell it for $4 a thousand cubic feet, and index it to the GNP deflator. That means that if inflation is 10 percent, you will be paying $80 thirty years from now, but you can afford it. Finance it by selling bonds—3 percent bonds—again, the principle is indexed to the GNP deflator. Those bonds will sell like hotcakes at well over par to people who want protection against inflation.

If we index the principle, the cash flow matches on both sides of the ledger. The borrower now has low cash flows and the lender is safe because both sides are indexed with the same index.

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[1] William M. Brown and Herman Kahn, "Why OPEC Is Vulnerable," *Fortune*, July 14, 1980, pp. 66-69.

[2] William M. Brown, "Can OPEC Survive the Glut?" *Fortune*, November 30, 1981, pp. 89-96.

Doctoral Dissertation Abstract

COLLEGE OF BUSINESS ADMINISTRATION
ARIZONA STATE UNIVERSITY

Editor's Note: *Our readers are often interested in research undertaken by doctoral candidates in the College of Business Administration at Arizona State University. Therefore, we occasionally include one or two abstracts of doctoral dissertations in* Arizona Business. *Readers who wish further information on any of these subjects may examine the complete dissertations in the ASU Hayden Library.*

EVALUATING PERCEIVED CHANGES RESULTING FROM PARTICIPATION IN A MANAGEMENT TRAINING PROGRAM

Philip R. Nienstedt

The purpose of this study was to determine if a particular management training program caused participants to improve certain of their behaviors and attitudes.

A literature review revealed limited results among the studies previously undertaken. Attempts to measure behavioral changes resulting from management training programs have been especially unproductive. Increasing emphasis in this area, along with its associated high costs, indicated considerable potential value of a thorough evaluation effort in this field.

The research questions related to changes in leadership effectiveness and in job behaviors and attitudes. The field setting was a one-week, live-in workshop for middle managers of a large semiconductor manufacturer. Both participants and their supervisors completed pretests prior to the training and posttests six months afterward. In addition, one of the instruments was administered *immediately* upon conclusion of the workshop.

The research design had several variations, and data were collected from 207 participants, 130 supervisors, and a control group of 28. After no maturity effects were shown, additional tests were conducted using regression techniques and other statistical measures.

The primary results and their implications are summarized as follows:

- The measurement of leadership effectiveness showed significant improvements six months after the training, especially among those who scored lowest on the pretests. This indicates successful accomplishment of one of the key workshop objectives. This is useful in future selecting and mixing of participants in individual workshops.
- Participants perceived improvements in their behaviors and attitudes between the beginning and the end of the training program. These higher levels were generally sustained for at least six months. Although *actual* job behaviors had no opportunity to change during workshop attendance, the *perception* of them improved significantly when the workshop concluded. The potential correlation between improved self-perceptions and improved job performance suggests a finding of considerable value.

- The supervisors perceived improvements, but less than those of their participating subordinates. Several implications of this include the possible need for supervisors to increase their understanding of workshop content, to support concepts learned and to reinforce changed behaviors.
- Individual responses to questions measuring job behaviors and attitudes varied considerably, but underlying consistencies were noted. The detailed analysis is useful in assessing overall workshop effectiveness and also in prescribing future course changes. Two separate scoring measures were utilized. The similarity of results implies that a simple measure may be as useful as a more complex one.
- Educational groupings of those with graduate degrees, bachelor degrees, and less than bachelor degrees were designated among the participants. All three groups appeared to improve effectiveness by similar amounts. The initial *levels* of effectiveness, however, were somewhat different, indicating implications for optimal mix of future participants in individual classes.

One recommendation with extensive implications was the need to further study the finding that perceptions of job behaviors improved before trainees actually returned to the work environment. A second was to further consider the value of mixing initially effective and ineffective class participants. A third was to directly relate training program results to course objectives and organizational norms.

Philip R. Nienstedt is Manager, Human Resources Programs—West, Motorola, Inc. Chairman of his dissertation committee was Dr. Gordon Inskeep, Professor of Management.

The Arizona Business Scene

1912

Mohave County's Colorado River Communities

A number of communities are located in the rapidly growing region along the Colorado River valley in western Mohave County. Lake Havasu City is Mohave County's largest and southernmost community along the river valley; the Bullhead City area, about 50 miles north of Lake Havasu City, is the other major population center of the river valley. These two communities account for nearly half of Mohave County's total population. Their rapid growth is illustrated in Table 1.

TABLE 1

LAKE HAVASU CITY AND BULLHEAD CITY AREA
Population, 1970 and 1980

	1970	*1980*	*Percentage Change*	*Percentage of Mohave County*
Lake Havasu City . .	4,861	15,737	223.7	28.5
Bullhead City area . .	4,007	10,363	158.6	18.6

Source: United States Bureau of the Census.

The Colorado River valley is a desert region of high temperatures and low precipitation. Although the area is located 200 miles from Phoenix, its climate is very similar. Lake Havasu City is at the northern edge of the Sonoran Desert, which is characterized by saguaro cacti, while the Bullhead City area is in the Mohave Desert, which stretches across much of southern California and southern Nevada.

Lake Havasu City is a planned community designed for an eventual population of 60,000 on twenty-six square miles. Development of the area began in 1964 by the McCulloch Corporation. The economy of the community is oriented mainly toward manufacturing, services, and trade.

The proportion of people working in the manufacturing industry in Lake Havasu City is nearly twice the state average (see Table 2). This heavy manufacturing concentration relates largely to one employer, the McCulloch Corporation, which employs approximately 1,100 people in the manufacturing of chain saw components and engine parts.

The services sector also employs approximately 28 percent of the work force, again considerably above the statewide average. This large number of people employed in services is due largely to the tourists drawn to this area. Lake Havasu City was designed to be a major recreation area oriented toward leisure and resort activities. Attractions include forty-five-mile long Lake Havasu, created in 1938 by the construction of Parker Dam on the Colorado River; a state park; public beaches; and camping and swimming areas. The city also created a major tourist attraction by dismantling the London Bridge and reassembling it over a channel of the Colorado River, with an English village constructed next to the bridge. The total impact of tourism on Lake Havasu City's economy has been estimated at $35 million yearly.

Since the nearest metropolitan area is 150 miles away (Las Vegas) this relative isolation also contributes

TABLE 2

LAKE HAVASU CITY AND
BULLHEAD CITY
EMPLOYMENT STRUCTURE, 1979
(Percentage of Total Employment)

	Lake Havasu City	*Bullhead City Area*	*Total Arizona*
Agriculture and mining	1	0	5
Construction	8	11	9
Manufacturing	28	5	15
Transportation, communication, public utilities	3	13	5
Wholesale and retail trade	24	32	24
Finance, insurance, Real Estate	4	5	6
Services	28	32	19
Public administration	4	3	19

Totals may not add to 100 percent due to rounding.

Sources: Arizona Department of Economic Security, Mountain West Research, Arizona Office of Economic Planning and Development.

to the large services sector because the local area must provide for a broad range of services to its residents. Many of the people who work in this sector are semi-retired residents with professional skills, since Lake Havasu City has a large proportion of retirees and semi-retirees in its population.

The trade sector, primarily retail trade, is the other major employment sector in Lake Havasu City. The three sectors of trade, services, and manufacturing account for 80 percent of Lake Havasu City's employment, with the remaining 20 percent spread over the several other sectors shown in Table 2. Only 4 percent of the work force is employed in public administration, far below the statewide average of 19 percent.

In any area that has grown steadily and rapidly, the construction industry is important to the local economy. Approximately 8 percent of the work force in Lake Havasu City is employed in the construction of residential dwellings and commercial and industrial buildings. An average of 975 dwelling units were constructed yearly from 1978 to 1980, an increase from the average of 500 per year from 1974 to 1977. Total construction valuation reached a high of $45.4 million in 1979. The national recession has affected both the number of dwelling units constructed and total valuation of all construction in both 1980 and 1981.

The Bullhead City area consists of several unincorporated communities, the largest of which are Bullhead City, Riviera, and Holiday Shores. The area began in 1946 as a construction camp for Davis Dam, which is 3 miles north of the community.

The economy of the Bullhead City area is largely dependent upon the trade and services sectors; manufacturing employs only 5 percent of the local work force. The transportation, communication, and public utilities sector partially compensates for the relative lack of manufacturing employment. The major employers in this sector are the hydroelectric facilities at Davis Dam and the Mohave Generating Station, which is located across the river in Nevada.

The trade and services sectors employ nearly two-thirds of the Bullhead City area work force, a higher percentage than in Lake Havasu City. The area is tourist oriented, and visitors are attracted by a number of casinos in Nevada just across the river from Bullhead City. Most of those establishments obtain employees from Arizona. Few services or stores are available in Nevada, so many of the visitors do their business in Arizona. The Nevada area is growing rapidly, meaning continued growth in the Arizona area as well.

A Survey of Arizona Business Conditions

HAROLD FEARON

Economic activity continued to decline again in November and at a fairly steep rate, according to results from the monthly business survey of the Purchasing Management Association of Arizona and the Purchasing Management Association of Southern Arizona. All indicators of economic activity were negative. The decline, which first became evident last June, continues to pick up speed, following the pattern of the downturn which began in the summer of 1980, except that the 1981 recession will be substantially deeper and of longer duration. The only good news is that the inflation rate continues to come down nicely; the November increase was the smallest in close to six years.

The purchasing business survey now is in its twentieth year of consecutive monthly reporting on the current status of the Arizona economy. Data are gathered through a questionnaire sent at the close of each month to purchasing managers throughout the state, asking them to indicate the direction of activity—higher, unchanged, or lower—on six key indicators of economic activity in the month just ended. Since these purchasing managers deal daily with the forces of supply and demand, they are able to provide timely and accurate information on current business trends, which enables economic turning points to be spotted.

Prices paid for major purchased items continued to go up in November, but as has been the case almost all through 1981, the rate of increase has declined each month. The November price increase was the lowest in five and a half years, since February, 1976, and only half as large as the monthly increase rate experienced last January. The survey showed 37 percent of the purchasing managers paid higher prices in November, 56 percent saw prices unchanged; while 7 percent paid lower prices in November than in October. We still are a long way from achieving stable prices, but the decrease in the inflationary trend has been dramatic, although achieved at the cost of an economic downturn.

Delivery time on shipments from vendors decreased slightly in November, as vendor operating rates fell, and they were able to make faster deliveries of merchandise to their customers. The 23 percent of the firms facing longer vendor delivery times was almost balanced with a slightly larger 24 percent who enjoyed faster service from their suppliers. While this indicator has been steadily trending downward as the economic slump becomes more pronounced, this was the first month of actual negative performance since July, 1980.

Inventory levels of purchased materials declined again, for the ninth consecutive month, as Arizona firms attempt to get stocks in line with operating rates which continue to ratchet downward. Higher inventories were reported by only 18 percent of the firms, while over twice as many firms (41 percent) cut stocks. This process will continue until an upturn in new orders becomes

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evident, and this action in itself will continue to intensify the depth of the downturn.

New orders received from customers continued to drop for the fourth consecutive month, and at a rate consistent with the previous month's poor showing. An increase in new order bookings was experienced by 25 percent of the firms, but a larger 37 percent saw a contraction in their order books as customer pessimism about the economic future continues to intensify.

Production of Arizona firms dropped again in November, consistent with the softening in new order receipts as 36 percent of the firms cut output. This was almost twice the 20 percent who increased production levels and marked the largest one-month production cut in a year and a half, since May, 1980.

Employment saw a major cutback in November—the sixth consecutive drop and the largest since April of 1975. Only 13 percent of the firms added to their work force, while a very large 31 percent pared payrolls. The depth and duration of the employment cuts already have become much more pronounced than during the downturn of 1980 and likely will continue to worsen over the next few months.

No signs are yet evident of any reversal of the economic downturn, and the cuts in production and employment probably will continue, at least over the next few months. However, while the current recession is more serious than the slight downturn of a year ago, it has not come close to the severity of the recession of 1974. The potential effects of the year-end tax reductions and the continually declining inflation rate should encourage the recession to bottom out toward the end of the first quarter of next year and to begin an upward trend in the second and third quarters of 1982.

The results of the November purchasing survey are shown in Table 1.

TABLE 1

NOVEMBER PURCHASING SURVEY

Key Indicators	*Percent of Purchasing Managers Indicating Each Response (November compared to October)* *Higher*	 *Same*	 *Lower*
Prices paid for major commodities	37	56	7
Delivery time from vendors	23	53	24
Purchased materials inventory level	18	41	41
New orders received	25	38	37
Production	20	44	36
Employment	13	56	31

Source: Purchasing Management Association of Arizona and Purchasing Management Association of Southern Arizona.

ARIZONA SALES OF ELECTRICAL POWER

	October 1981	*October 1980*	*One Year Percentage Change*	*October 1981*	*September 1981*	*One Month Percentage Change*
Sales of Kilowatt Hours (Thousands)	2,404.5	2,288.2	5.1	2,404.5	3,140.9	-23.4

Retail Food Prices

NOVEMBER, 1981

Retail food prices in Maricopa County fell 0.1 percent in November, following two months of unchanged prices. The food price survey is compiled by the Bureau of Business and Economic Research, College of Business Administration, at Arizona State University. Cosponsor of the study is Valley National Bank. The November index of 267.7 indicates that shoppers would now have to pay $26.77 for a basket of foods that would have cost $10.00 in 1967. These foods could have been purchased for $25.22 one year ago. The November, 1981 index reflects a 6.1 percent increase over the November, 1980 value.

Decreases were noted in three of the five subgroups: *Meats, Poultry, Fish, and Eggs* declined 0.6 percent, followed by *Cereals and Bakery Products* (-0.4 percent), and *Fruits and Vegetables* (-0.1 percent). Partially offsetting these decreases were increases for *Other Foods* (0.1 percent) and *Dairy Products* (0.6 percent).

Lower prices in several categories of beef and poultry contributed to the lower index value for the *Meats, Poultry, Fish, and Eggs* subgroup. Declining prices for rib eye and rib steaks caused the category of steak, other than round or sirloin, to fall 8.0 percent. Sausage decreased 7.0 percent, followed by a 5.1 percent decrease for round steak. All poultry items declined, led by fresh whole chicken (-4.8 percent). Noncanned ham showed the largest increase in this subgroup (6.9 percent); followed by eggs (3.6 percent); and bologna, liverwurst, and salami (2.6 percent).

Cereals and Bakery Products showed several decreases. Flour and prepared flour mixes dropped 4.1 percent. Fresh biscuits, rolls, and muffins declined 1.9 percent, followed by cereal (-1.3 percent). These decreases, however, were partially offset by increases in the category of crackers, stuffing, bread/cracker crumbs, and meal (3.9 percent) and fresh cakes/cupcakes (1.0 percent).

Decreasing prices for bananas (-12.7 percent) were partially offset by higher prices for tomatoes (14.2 percent), causing the subgroup of *Fruits and Vegetables* to remain virtually unchanged. Other notable price changes included higher prices for oranges (2.8 percent) and canned/dried fruits (2.3 percent). Lower prices were posted for potatoes (-3.6 percent) and lettuce (-2.8 percent).

Price increases slightly outweighed decreases in the subgroup of *Other Foods* in November. Sugar and artificial sweeteners dropped 8.1 percent, followed by a 4.4 percent decline for carbonated drinks, excluding nondietary cola. A drop of 4.4 percent was also noted for the category of nondairy substitutes, imitation milk, and peanut butter, which resulted from sharply falling prices for peanut butter counteracting high prices for nondairy creamer. Increases were shown for frozen prepared food (3.4 percent), roasted coffee (2.7 percent), and canned/packaged prepared foods (2.2 percent).

Almost all *Dairy Products* showed price increases, contributing to this subgroup's 0.6 percent gain. Ice cream and related products posted the largest gain of 3.9 percent. Gains were also noted for the miscellaneous dairy products category (3.4 percent) and butter (1.4 percent).

A comparison of October, 1981, Food Consumed at Home for Maricopa County with index values for four selected metropolitan areas reveals that the outlays required to purchase a food group in October (obtainable for an outlay of $10.00 at 1967 average prices) were $26.81 in Maricopa County; $27.42 in the Los Angeles area; $29.70 in the San Francisco area; $27.61 in the Chicago area; and averaged $27.99 in the United States.

TABLE I

INDEX FOR FOOD CONSUMED AT HOME

Maricopa County, United States, and Selected Metropolitan Areas
(Average 1967 = 100 percent)

Group	*Maricopa County Nov. '81*[a]	*Maricopa County Oct. '81*[b]	*United States* Oct. '81*	*Los Angeles* Oct. '81*	*San Francisco* Oct. '81*	*Chicago* Oct. '81*
Food Consumed at Home	267.7	268.1	279.9	274.2	297.0	276.1
Cereals and Bakery Products ...	261.9	263.0	275.0	282.9	281.1	273.8
Meats, Poultry, Fish, and Eggs ..	266.4	268.1	256.4	255.6	256.8	257.6
Dairy Products	235.4	233.9	244.6	239.5	238.3	236.9
Fruits and Vegetables	257.2	257.4	275.2	266.9	256.9	274.0
Other Foods Consumed at Home	297.0	296.7	326.4	337.8	340.6	327.1

*Computed from data contained in *The Consumer Price Index:* U.S. Department of Labor, Bureau of Labor Statistics, Washington, D.C. Prices pertain to the metropolitan area, which includes adjacent suburbs.

[a] Maricopa County food prices are reported for the month closest to publication.

[b] Comparisons of food prices among various cities and the United States average are made on the basis of earlier months because of the lag in collecting price reports from these other areas.

Note: Index comparisons between Maricopa County and the other regions show only that food prices in Maricopa County have increased more or less than food prices in the other regions since 1967. The indexes cannot be used to determine the actual differences in food price levels between the regions.

Source: Bureau of Business and Economic Research, College of Business Administration, Arizona State University, in cooperative cosponsorship with Valley National Bank.

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Report To The Reader

The Consumer Price Index (CPI) is used as an index of price changes, as an index of changes in the cost of living, and as an escalator for many kinds of payments.

Millions of American workers are covered by labor contracts that include automatic cost-of-living adjustments. The CPI is also used to adjust other income payments or income supplements—Social Security payments, federal and military retirement benefits, food stamp allowances, and payments from many welfare programs. It is also being used as a base for escalator clauses in a growing number of rental, lease, royalty, and other types of contracts.

Because of its importance and because of some recent changes in the index, we have devoted more space than usual to the Consumer Price Index in this issue.

The main change is the adjustment of the base period from 1969 to 1977. Since this changes the value of the index, we have printed the complete history of the Metropolitan Phoenix CPI on the new 1977 base. For the next few quarters, we will continue to publish index figures for both base periods, until readers have had opportunity to adapt to the change. Other changes in the CPI are explained in the article on page 13.

Following the tables of the CPI using the 1977 base, we present the Fourth Quarter CPI, showing an overall increase of only 2.2 percent. Food showed the smallest increase at 0.4 percent. Housing increased 2.7 percent, which was comparable to the previous three quarters. Apparel and Upkeep showed a sizable 4.2 percent rise, but Transportation increased only 1.8 percent. Medical Care was up 3.0 percent, Entertainment, 4.0 percent; while Other Goods and Services increased 2.0 percent.

Editor's note: Because of recent budget cuts by the Arizona legislature, Arizona State University has been forced to reduce costs wherever possible. For that reason, the February and March issues of *Arizona Business* have been combined into one issue. We regret any inconvenience this may have caused our readers and trust we will be able to resume the normal continuity of publication for the remainder of the year.

Factors Contributing to the Performance and Satisfaction of Branch Managers

KENNETH J. EUSKE
DONALD W. JACKSON, JR.
WILLIAM E. REIF

The financial services industry, composed of banks, savings and loan institutions, and credit unions, represents an important sector of Arizona's economy, with assets of over $21 billion at the end of September, 1981.[1]

The branch managers of the more than 800 branch offices in Arizona are critical to the operation of the financial institutions. Although their functions differ among institutions, they are often accountable for factors such as operating income of their branch; meeting objectives for loans and deposits; and meeting standards for number of calls on prospective clients, referrals, and bad debts of their branch. Given the size of the industry, and the relative importance of branch managers, a study was conducted to investigate the factors that contribute to the performance and satisfaction of branch office managers in Arizona's financial services industry.

A manager's job satisfaction and job performance are both strongly affected by the leadership style of the supervisor. Other factors are investigated that may also affect satisfaction or performance of managers.

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RELATIONSHIPS INVESTIGATED

The two factors investigated in the study were the performance and satisfaction of branch managers. Performance relates to how well the managers do in their jobs and satisfaction involves how contented they are with their environment.

The first step in designing the study was to operationally define performance and satisfaction. Performance measures were obtained from the regional managers who were asked to rate the performance of the branch managers on each criterion using a seven-point scale. The performance score of each branch manager was determined by summing the supervisor's ratings for all performance measures. Representative of the performance measures used in the study were branch office operating income, number of classified loans in the credit audit, amount of loan losses incurred, branch office deposits, ratio of sales to prospect calls, and cross-training program for branch personnel.

In defining satisfaction, branch managers were asked to indicate their satisfaction with a total of 72 items in five categories: pay, promotions, work, coworkers, and supervision.[2] Each branch manager's satisfaction score was then determined by adding the values recorded for each of the individual items.

The next step in the study was to determine the factors that might be related to performance and satisfaction. Review of the literature revealed three primary factors plus several moderating influences (Table 1). The first factor, which was proposed to be

TABLE 1

SUMMARY OF VARIABLES AND RELATIONSHIPS TO PERFORMANCE AND SATISFACTION

The Dependent Variable	*Should be Related To The Independent Variables*	*And May Be Affected By the Moderating Variables*
Performance	Locus of control Supervisor's leadership style Degree to which the actual performance measures used are those over which the branch manager perceives control	Age Gender Education
Satisfaction	Locus of control Supervisor's leadership style The degree to which the actual performance measures used were the desired performance measures	Length of time with the bank Bank worked for Supervisor doing the evaluation

Source: Developed by the authors.

related to both performance and satisfaction, was the supervisor's leadership style.[3] The questions addressed four different components of the supervisor's leadership style:[4]

- *Support:* friendly and easy to approach, attentive, and willing to listen.
- *Goal emphasis:* encourages high standards of performance.
- *Work facilitation:* encourages independent thought and action, offers ideas for improving performance and solving job-related problems.
- *Interaction facilitation:* encourages participation and teamwork, provides opportunities for exchanging ideas and opinions.

Leadership styles represent the way in which supervisors treat subordinates and influence job-related behaviors. Thus, they were believed to be related to both the performance and satisfaction of branch managers. The higher the leadership-style score, the more supportive, encouraging and participative the manager was perceived. It was hypothesized that higher leadership-style scores would be associated with higher performance and satisfaction.

The second factor, which was believed to affect both performance and satisfaction, was the branch manager's locus of control.[5] This measure classifies people into two categories: Individuals with an internal locus of control (known as internals) feel that they are in control of the forces that affect their job performance. Individuals with an external locus of control (known as externals) feel that their success or failure on the job is determined by forces beyond their own control. It was proposed that internals would perform better and be more satisfied than externals, since internals see their world as controllable.

The third factor was related to the measures used to evaluate the performance of branch managers. It was felt that higher performance would result when the measures used for evaluation were those that the branch managers felt they could control. Furthermore, it was felt that higher satisfaction would result when the performance measures used were those that the branch managers agreed were relevant to their jobs.

Previous research indicated that moderating influences such as age, sex, education, length of time with the bank, the bank itself, and the supervisor doing the evaluation might also affect the performance and satisfaction of the managers.[6] Therefore, measures of these factors were also included in the study.

A secondary purpose of the study was to shed some light on the relationship between satisfaction and job performance. All managers, whether they are consciously aware of it or not, make assumptions about the satisfaction-performance relationship. Based upon those assumptions, they develop and implement strategies for improving performance. If, for example, managers take the traditional, and more widely held, view that satisfaction causes high performance, there is a tendency to apply human relations strategies in an attempt to increase job satisfaction (or morale) on the assumption that once employees are satisfied, they will become high performers. On the other hand, if managers believe that employees who increase their performance will become more satisfied, the emphasis will be more on performance management techniques such as management by objectives and productivity programs. Finally, to the extent that no relationship is assumed between satisfaction and performance, managers are faced with the task of developing dual strategies: One for increasing job satisfaction and the other for improving performance. Although the research that has been done to date to test these assumptions is limited and the results mixed, there is more support for the assumption that performance causes satisfaction, or that there is no relationship between satisfaction and performance, than for the traditional view that satisfaction causes performance.

THE STUDY

The branch managers selected for the study were chosen from two publicly held financial institutions in Arizona. Each financial institution had assets of over $2 billion and numerous branches. Participating in the study were sixty-seven branch managers plus their direct superiors—five regional managers. All of the branch managers represented branches that serve commercial and residential customers and represented both metropolitan and rural market areas.

The data were collected utilizing a structured questionnaire and were analyzed using two multiple regression models. The first model examined factors that were significantly related to the satisfaction of the managers; the second examined factors that were significantly related to performance. The overall findings are summarized in Table 2.

TABLE 2

SUMMARY OF RELATIONSHIPS

Dependent Variable	*Independent and Moderating Variables*	*Significant*	*Level of Significance**
Satisfaction	Actual/desired performance measures	Yes	a
	Leadership style	Yes	b
	Locus of control	Yes	b
	Gender	No	
	Education	No	
	Length of time with bank	No	
	Supervisor	No	
	Bank	No	
	Age	No	
Performance	Actual/controllable performance measures	No	
	Leadership style	Yes	b
	Locus of control	No	
	Gender	Yes	a
	Education	No	
	Length of time with bank	No	
	Supervisor	No	
	Bank	Yes	b
	Age	No	

*Significance level: a=.05; b=.005

Source: Developed by the authors.

Factors Affecting Satisfaction

The study showed that satisfaction was significantly related to leadership style, locus of control, and the degree to which actual performance measures used were the same as those desired by the branch manager. As expected, a significant positive relationship was found between satisfaction and all four dimensions of leadership: The higher the scores on the supervisory leadership questions, the higher the employee's level of satisfaction. Specifically, the branch managers who were more satisfied with their jobs were those who felt their supervisors (regional managers) were very supportive; set and reinforced high standards of performance; encouraged independent thought and action, yet were available to help with problem solving; and promoted teamwork and job-related interactions.

Branch managers who felt they were in control of the forces that affected their performance and subsequent rewards (internals) recorded higher satisfaction scores than those employees who felt that performance and organizational rewards were attributed to forces independent of their own actions (externals). From a practical standpoint, this indicates that the branch managers are more satisfied if they operate in a well-defined, unambiguous work environment where they know the requirements of the job and the results that are expected of them.

The study also found that there is more job satisfaction when actual evaluation measures (those formally used to evaluate performance) are the same as those that branch managers would like to have used for reviewing their performance. Although having organizational requirements totally consistent with individual needs and expectations may be more ideal than real, some leadership strategies can be used to increase satisfaction: for example, having branch managers actively participate in establishing performance measures.

Factors Affecting Performance

Performance was found to be significantly related to leadership style, gender, and the financial institution itself. Consistent with the results for satisfaction, performance was strongly related to all four dimensions of supervisory leadership, which establishes leadership style as a potent factor in any branch financial institution management system. Not only can it be used to increase the satisfaction of branch managers, but it also represents a critical factor in strategies to improve performance.

The average performance rating for men in both financial institutions was significantly higher than the average performance rating for women branch managers. Since this study was not designed to account for the male-female difference in performance, the following explanations are intended to raise questions more than to provide answers.

One possible explanation is that actual differences do exist between performance of men and women branch managers. This explanation, however, may not be very plausible in this situation because it might be argued that for a woman to have been promoted to a traditionally male-dominated position, she would have had to demonstrate qualities equal or superior to those of her male counterparts. A second possible explanation is that some gender bias does exist and, as other studies have shown, equivalent performance of women is rated lower than that of men.[7] If this were true it would provide a strong argument in favor of objective, quantifiable performance measures that leave less room for subjective interpretation and qualifications.

Another finding revealed that the average performance rating of branch managers in one financial institution was significantly higher than the average performance rating in the other financial institution. One explanation is that rater bias among one group of regional managers may have affected the performance ratings. The authors have no evidence, however, that this was the case. A second, more reasonable explanation involves the source of performance measures themselves. The performance measures used in this study to evaluate the branch managers in the financial institution with the higher average performance rating score were taken directly from a form that is used as part of the financial institution's formal performance appraisal process. In the other financial institution, the performance measures were generated by the participating regional managers, who stated they were the ones used to evaluate branch manager performance.

Given the two situations, it is possible that the significant difference in average performance ratings is the result of the difference between a relatively well-defined management system and one that is less clearly defined. The branch managers in the one financial institution were operating within the guidelines established by a formal set of performance measures. This allowed them to concentrate their efforts in the specific areas the financial institution formally recognized as "payoff" areas. In the less clearly defined system, the managers may have spread their efforts and resources across numerous activities because they were not sure which efforts would lead to results. One might expect the consequence of this type of behavior to be a lower level of performance.

Relationship Between Performance and Satisfaction

Although this study was not directly designed to test whether performance causes satisfaction or vice versa, the correlation between the two was examined.[8] While there was a statistically significant correlation between the two factors, the relationship was so weak that in reality, there is not a strong enough relationship between satisfaction and performance to treat the two as being directly related.

CONCLUSIONS AND RECOMMENDED ACTIONS

The results of this study clearly show that the manager's leadership style is a key factor when designing strategies to improve job satisfaction or performance for branch managers. This fact supports the proposition that the leading influence on job-related behavior of branch managers is their supervisor in this case the regional managers. Concerted efforts to strengthen that relationship along the four leadership dimensions of goal emphasis, support, work facilitation, and interaction facilitation can be expected to improve performance and satisfaction.

To increase job satisfaction, it is also recommended that, to the extent possible, management try to create a work situation in which the measures used for performance evaluation are those that branch managers want used for that purpose. When negotiating differences between actual and desired performance measures, it is generally accepted that organizational requirements should carry more weight. At the same time, when branch managers participate in developing those measures, they will be more likely to adopt the stated goals as their own and perform in a manner that is consistent with the organization's objectives.

The strong relationship between locus of control and satisfaction suggests that branch managers will be more satisfied if they are working within a system where the factors or events that affect their performance and rewards (e.g., merit increases, promotion, preferred position/location) are perceived to be within their control. Therefore, when designing performance evaluation systems, supervisors should be alert to the benefits that can result from including measures over which the branch managers can exercise control.

In addition to leadership style, the findings of this study suggest that one of the major contributors to performance is a well-defined, performance-based management system. It has been demonstrated repeatedly that simply by having objectives, people tend to perform at a level that is consistent with achievement of the goal. Similarly, by knowing what results are expected of them, people tend to concentrate their efforts and commit their resources to the few critical factors or functions that directly contribute to those results. Quantifiable performance measures, which provide the foundation for a performance-based system, serve a dual purpose in this regard. First, they provide the guidelines and set of expectations within which branch managers are to perform; and second, they serve as the basis for performance appraisal and the administration of organizational rewards.

Also, one should not assume that satisfaction necessarily leads to high performance (i.e., a happy branch is not necessarily a productive branch), nor that high performers are necessarily satisfied with their jobs. The preferred approach is to treat performance and satisfaction independently and develop separate strategies for increasing the performance and for increasing the satisfaction of branch managers.[8]

Finally, even though the individuals who participated in this study were branch managers of financial institutions, the findings may be equally applicable to managers in other service industries in Arizona. If this is so, managers in Arizona service industries appear to prefer a work environment with well-defined objectives over which they have some degree of control and with supervisors who have a leadership style that is high on support, goal emphasis, work facilitation, and interaction facilitation.

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[1] The work reported here was supported in part by the Foundation Research program of the Naval Postgraduate School with funds provided by the Chief of Naval Research; and by the Bureau of Business and Economic Research, College of Business Administration, Arizona State University.

[2] Job satisfaction was measured using the Job Description Index. For more information see Patricia C. Smith, Lorne M. Kendall and Charles L. Hulin, *The Measurement of Satisfaction in Work and Retirement: A Strategy for the Study of Attitudes* (Chicago: Rand-McNally, 1969).

[3] For an excellent review of the leadership-style research, see Jeffrey C. Barrow, "The Variables of Leadership: A Review and conceptual Framework," *The Academy of Management Review* 2 (April 1977): 231-251.

[4] Leadership style was measured using a questionnaire developed and validated in a previous study. For more information, see James C. Taylor and David G. Bowers, *Survey of Organizations: A Machine-Scored Standardized Questionnaire Instrument* (Ann Arbor, Michigan: Institute for Social Research, The University of Michigan, 1972) 47-61.

[5] Locus of control was measured using an abbreviated 11-item scale, see Gopal K. Valencha, *Construct Validation of Internal-External Locus of Control as Measured by an Abbreviated 11-item IE Scale*, unpublished Ph.D. Dissertation (Columbus, Ohio: The Ohio State University, 1972).

[6] See James O. Lugo and Gerald Z. Hershey, *Human Development* (New York: Macmillan Publishing Co., Inc., 1974).

[7] For example see, Gail T. Pheterson, Sara B. Kiesler and Philip A. Goldberg, "Evaluation of the Performance of Women as a function of Their Sex, Achievement, and Personal History," *Journal of Personality and Social Psychology*, 19 (July 1971): 114-118.

[8] A correlation of .3 was found between performance and satisfaction which was significant at the .05 level but which explained only 9 percent of the variance between the two measures.

Swap Meets: A Profile of Shoppers

NABIL RAZZOUK
DAVID GOURLEY

During the past decade, marketing researchers have shown a growing interest in changes that occur in the business environments and the impact of these changes on marketing institutions.[1] Some writers have specifically focused on the future of the retailing industry in a changing environment.[2] Yet, most of this literature focuses on the traditional forms of retailing with little attention to trends outside of the retailing mainstream.

One such growing trend is the swap meet or flea market. This form of retailing is gaining popularity as more Americans feel the pinch of an economic slowdown.[3] The purpose of this article is to explore the nature and origin of swap meet retailing in the United States, and report the findings of a study identifying the characteristics and preferences of swap meet shoppers.

NATURE AND ORIGIN OF SWAP MEET MARKETS

Individual enterprise in retailing has existed for decades in such forms as garage sales or yard sales; however, swap meets, as we know them today, are a relatively recent phenomenon. Most of these large automobile-oriented operations have originated in the past few years.

Before the days of the yankee peddler and the general store, early settlers exchanged surplus merchandise in outdoor markets often known as trading posts. These local markets played a major role in the socialization of the settlers. Colonists met in these markets, interacted with neighbors and passers-by from adjacent communities, exchanged news and views, and bartered merchandise they brought along with them.[4]

Like the days of old, today's swap meets are outdoor markets providing activity similar to the early trading posts—merchandise, festivity, and profit. They are outdoor markets at which antiques and new and used merchandise are bought or traded by individuals.[5] Some of these markets command weekend traffic of 60,000 shoppers[6] and accommodate up to 4,000 vendors.[7] A greater concentration of swap meets exists in the western and southwestern regions where the mild climate enhances this type of market year round. Some of the individual markets in these regions are part of a chain of "super swap meets" with operations in several cities. Recognizing the legitimacy of this developing form of retailing, some cities have passed ordinances governing the activities of swap meet operation (e.g., Phoenix, Arizona; San Bernardino, California; and San Fernando, California).

Swap meets are usually held in enclosed (fenced) areas where ample space is available for parking and merchandise display. Shoppers' admission to these markets usually consists of a fee for parking ranging from fifty cents to one dollar. Sellers are charged a rental

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Swap meets are a fast-growing retailing alternative that has strong cross-sectional appeal. A survey of swap meet shoppers showed that bargains, browsing, and fun were the reasons most often cited for visiting these outdoor markets.

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fee for a space in which they display their merchandise. These sellers come in passenger cars, pick-ups, trailers trucks, and vans, each with something to sell or exchange. Typical merchandise includes collectibles, household items, fabrics, clothing, books, magazines, records, tapes, tools, electrical appliances, wigs, antique furniture, bottles, jewelry, relics, fruits, and vegetables.[8]

In keeping with the needs of a growing market, managements of swap meets have regularly upgraded their services to compete with established retail institutions. Modern rest rooms, concession stands, benches, check cashing and change, electrical outlets, information booths, public address systems for announcements and advertising, and security are some of the services available for shoppers and sellers at swap meet markets. To pay for these services, swap meet operators depend on revenues from sales of parking spaces and food concessions that are operated by the mangement. Additional income is generated from walk-in admissions, check cashing and change services, and advertising announcements over a public address system.

Growth Factors

Several environmental factors that may account for the growth of swap meets into a widely accepted institution of retailing include inflationary economics, which have imposed a growing conservation ethic and a budget squeeze; the consumer's need for socialization while shopping; and changing consumer demographics and lifestyles. The average American consumer is getting older, more independent, and more creative. Most of these trends favor swap meet shopping as an alternative or supplement to conventional retail institutions.

Another factor is that swap meets, so far, have escaped the government regulation that applies to most other retailing institutions. A report to the police department on the nature of items sold or exchanged is nearly the only requirement imposed on sellers in swap meet markets. The Internal Revenue Service also has maintained a very relaxed attitude toward swap meets, and the ordinances in most cities have been written with the occasional seller in mind. This lax attitude of the government grants swap meet sellers a definite advantage over their established counterparts who are more heavily regulated. In addition, sellers in swap meet markets escape many fixed costs normally associated with conducting business. As a result, these vendors are able to provide merchandise to shoppers at a lower price.

The following sections of this article report the findings of a study designed to develop a profile of swap meet shoppers and to identify the reasons for their support of this nonconventional retail institution.

PRESENT STUDY AND METHODOLOGY

Data for the study were gathered from 236 adult shoppers (100 females and 136 males) at the three major swap meet markets in the Phoenix metropolitan area. The information was obtained from the respondents through structured individual interviews conducted by trained interviewers on the grounds of each market.

The interviewers stationed themselves near the exit of the market and were instructed to interview every seventh adult who went by after an interview had been completed. This procedure was designed to reduce the level of response homogeneity that may be caused by interviewing members of the same family or social group. If the selected shopper refused to participate, the interviewers were to move on to the next available shopper who went by.

Findings

A demographic profile of the sample respondents is first presented in this section, followed by their shopping patterns at swap meet markets. The demographic response categories used in this study were similar to those used by *Inside Phoenix*[9] in reporting sample data on the Metropolitan Phoenix population. This similarity should facilitate, where possible, comparisons between the two samples.

Table 1 shows the age distribution for the swap meet sample and for the *Inside Phoenix* sample. The respondents were fairly well distributed with close to 43

TABLE 1

AGE DISTRIBUTION OF SWAP MEET SHOPPERS

Age Group	*Swap Meet Sample Percentage*	*Inside Phoenix Sample Percentage**
18-24	14.4	18.0
25-34	26.1	22.1
35-49	17.1	23.2
50-64	21.4	20.5
65 and over	21.1	16.2
Total	100.0	100.0

$X^2 = 4.56$; df = 4; not significant at the .05 level.

*As reported in *Inside Phoenix 1978*, adjusted to exclude people under 18.

Source: Survey by the authors.

percent of the shoppers 50 years of age or over. This figure is much higher than the 37 percent of the *Inside Phoenix* sample who fall into this age category. On the other hand, only 14.4 percent of the respondents were 18 to 24 years old as compared to 18 percent for the *Inside Phoenix* sample. Children were excluded from the sample although many were accompanying adult shoppers. The sample percentages were not significantly different from the *Inside Phoenix* study. The apparent over-representation of the 50 and above group in the sample may well be attributed to the large community of senior citizens living in the proximity of one of the surveyed markets. However, a chi square statistical test did not indicate a significant difference between the two sets of sample percentages.

Shoppers came from various ethnic backgrounds with whites accounting for 87 percent, followed by Spanish with 8 percent, and blacks and other minority groups accounting for the remaining 5 percent.

Over 70 percent of the respondents reported an annual household income of over $10,000 (Table 2), 45 percent had an income of over $15,000, and 17 percent were in the bracket of $25,000 and above. This concentration at the middle and higher levels of income is an indicator of the broad appeal of swap meets across different socioeconomic classes. These shoppers may have other reasons to shop at swap meets in addition to low prices and bargain hunting.

Table 3 shows the respondents' level of education compared to the *Inside Phoenix* sample. One-third of the respondents had only a high school diploma. Another third had completed one to three years of college, but only 8.6 percent had graduated from college. The sample percentages were significantly different from the *Inside Phoenix* sample, indicating an appeal to the shopper with less than a college degree.

TABLE 2

ANNUAL HOUSEHOLD INCOME OF SWAP MEET SHOPPERS

Income	*Swap Meet Sample Percentage*	*Inside Phoenix Sample Percentage**
Under $5,000	11.7	12.0
5,000 - 9,999	23.9	20.0
10,000 - 14,999	19.3	22.0
15,000 - 24,999	25.8	28.0
25,000 - 34,999	12.2	10.0
$35,000 or more	7.0	8.0
Total	100.0	100.0

X^2 = 1.71; df = 5; not significant at the .05 level.
*As reported in *Inside Phoenix 1978*

Source: Survey by the authors.

TABLE 3

EDUCATIONAL LEVEL OF SWAP MEET SHOPPERS

Education Level	*Swap Meet Sample Percentage*	*Inside Phoenix Sample Percentage**
Grade school	11.9	12.0
1 - 3 years high school	12.8	10.0
Graduated from high school	33.3	31.0
1 - 3 years college	33.3	23.0
Graduated from college	8.6	24.0
Total	100.0	100.0

X^2 = 15.45; df = 4; not significant at the .05 level
*As reported in *Inside Phoenix 1978*

Source: Survey by the authors.

Seventy-five percent of the respondents were married and 71.2 percent had children. The majority (54.6 percent) lived in homes they own, while 27.1 percent lived in trailers and 13.5 percent lived in rented apartments. The majority (70.6 percent) were residents of Arizona; the remaining 29.4 percent were mostly winter visitors who spend from one to eight months a year in Arizona.

Concerning sources of print advertising, 63.3 percent reported to be readers of the *Penny Saver* (local advertising paper) and 38 percent read a local newspaper. The high rate of readership for the *Penny Saver* may indicate this group's concern for cost savings, and the search for bargains and antiques.

The shoppers reported diverse hobbies and interests. Sports was the most reported hobby (36.2 percent) followed by handcrafts (32 percent), fishing and hunting (18.7 percent), music (10.9 percent) and cars (8.7 percent). Several other hobbies were reported but at very low frequencies.

Shopping Behavior

When respondents were asked if this was their first visit to a swap meet market, 86.9 percent said they had been to a swap meet before. A majority (86 percent) also reported shopping in that particular market before. As to the frequency of attendance at these markets, 45 percent had been to a swap meet one to two times in the past four weeks; 26.3 percent had shopped at swap meets three to five times in the past four weeks; and 6.4 percent had been to swap meets six or more times times in the past four weeks. These results are clear indicators that the majority of the shoppers in these markets are repeat shoppers and not occasional passers-by.

Approximately 60 percent indicated they had purchased some merchandise at swap meets within the last week. Only 0.5 percent said they had never purchased any merchandise at a swap meet. When further asked to identify the type of products purchased in these markets (Table 4) jewelry led with 22 percent, clothing followed with 16.3 percent and furnishings third with 13.8 percent. Only 5.6 percent had purchased an antique during the past week.

TABLE 4

ITEMS PURCHASED AT SWAP MEETS

Items Purchased	*Percentage of Respondents*
Jewelry	22.0
Clothing	16.3
Home furnishings	13.8
Toys	13.4
Arts & home decorations	11.4
Appliances	11.3
Sports equipment and supplies	9.5
Tools	9.5
Books and novelties	7.2
Pets and pet accessories	7.2
Antiques	5.6
Auto parts	5.1
Food and drink	4.5

Note: Percentages do not add up to 100 because of multiple responses.

Source: Survey by authors.

An attempt was made to find out the condition of the goods purchased at swap meets. Seventy-six percent had purchased used merchandise. With such a large number, one might expect a high level of dissatisfaction with the functional state of the goods purchased. However, very little dissatisfaction was reported in this study. On a scale of one to five (one indicating very low satisfaction and five for very high satisfaction), 65 percent rated their satisfaction as five; 15.6 percent had a rating of four; 14.5 percent a rating of three; and only 3.2 percent rated their satisfaction at a low of one. These ratings indicate that close to 95 percent of the respondents were generally satisfied with their purchases at swap meets.

Why do these consumers shop at swap meet markets? The responses to this question revealed the shoppers' need for socialization and for fun at a low cost. Bargains, browsing, and fun were the reasons most often cited for shopping at swap meets (Table 5). Approximately 51 percent said they visit these markets in search of bargains, 31.8 percent visit them to have some fun, 30 percent go to browse. A fourth of the respondents go to swap meets "just to get out," 21.3 percent go because they consider swap meet prices to be generally much lower than the prices at established retail outlets; and 13.3 percent go to swap meets to watch people. These responses seem to reaffirm the festival image that swap meet managers seek to portray.

TABLE 5

REASONS FOR SHOPPING AT SWAP MEETS

Reason	*Percentage of Respondents*
In search of bargains	51.0
For fun	31.8
Browsing	30.0
Just to get out	25.0
Lower prices	21.3
Variety of items	18.0
To watch people	13.3
Other	18.0
Antique wanted not available elsewhere	9.5

Note: Percentages do not add to 100 because of multiple responses.

Source: Survey by the authors.

Later, when asked about what they liked or disliked the most about swap meets, the results in Table 6 show that 24.3 percent liked the "wide variety of merchandise," 20.8 percent liked the bargains and slightly over 14 percent like being outdoors and around people. But what do these shoppers dislike the most about swap meets? Over half of the respondents answered with "nothing." The most commonly mentioned dislike, however, was "crowdedness," 6.4 percent, followed by "bad deals" with 5.9 percent and "inadequate parking" with 3.9 percent.

In answer to the multiple-response question about day preference, the weekends proved to be the most popular days for attending swap meets. Of the respondents, 58 percent preferred shopping at swap meets on Saturdays, 62 percent favored Sundays, 11.4 percent favored Wednesday and 10 percent favored Friday. Slightly over 80 percent preferred to attend swap meets during the day. Night shopping was favored by only 2.8 percent of the people surveyed, while 10.8

percent preferred both day and night activity. The remainder had no preference.

To some of the respondents interviewed, swap meets are an outlet for selling as well as buying merchandise. Thirty-one percent of the respondents had sold items at swap meets at least once during the previous four weeks.

TABLE 6

WHAT SHOPPERS LIKE THE MOST ABOUT SWAP MEETS

Features Liked Most	*Percentage of Respondents*
Variety of items displayed	24.1
Bargains	20.8
Being around people	14.5
Being outdoors	14.4
The festival atmosphere	10.4
Fun or enjoyment	9.7
Misc. (convenience, food etc.)	6.1
Total	100.0

Source: Survey by the authors.

SUMMARY AND IMPLICATIONS

Are swap meets a fad or are they a manifestation of changing times in retailing? This analysis seems to indicate that swap meet shopping is a favorite activity that some shoppers seek frequently. Where a swap meet exists, it manages to draw on the rich and the poor; the highly educated and the less educated; blacks, whites, and various ethnic groups; males and females; young and old. Such a strong cross-sectional appeal may serve as a warning to some established retail institutions that may be losing ground to this growing retail institution.

Some shoppers may think of shopping as a necessary evil. The layout of stores, the absence of socializing facilitators (e.g., chairs, benches, refreshments) in conventional stores, and the presence of psychological intruders (i.e., security cameras, security guards, mirrors, etc.), may repress the shopper's desire and willingness to spend more time in the store, seek more socialization, or even have fun while shopping. In addition, the American consumer is much older now than ever before, and for this segment, social interaction and a relaxed atmosphere are particularly important.[10]

Swap meets provide new shopping alternatives in today's sluggish economy, but it may be difficult to assert that swapping is here to stay; however, there is definitely an implication that it is a fast growing phenomenon and worth more attention that it has received in the marketing literature. It is possible that swap meets may lose their competitive edge if they are subjected to government regulation or if they self-destruct by becoming more conventional and looking more like extended outdoor shopping plazas lined with merchandise that is obtainable everywhere else. Until then, however, conventional retailers must take notice.

Some of the sellers interviewed in the swap meets said they have permanently closed down their established business in favor of regular weekend appearances at these markets. These retailers have looked at the trends and have responded with an adaptation strategy for continued survival.

In an era where change is the only certainty, the uncommon rather than the common deserves attention as harbingers of trends. In several states, swap meets have proven themselves as accepted shopping alternatives. Retailing professionals and researchers need to recognize the importance of this and similar phenomena that may alter the nature of American shopping habits.

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[1] See, for example, Stephen W. Brown, "The Consumer in an Era of Shortage," *MSU Business Topics* (Spring 1977) 49-53;Nessim Hanna, A. H. Kizilbash, and Alvert Smart, "Marketing Strategy Under Conditions of Economic Scarcity," *Journal of Marketing*,38 (July 1974): 20-29; and Theodore Levitt, "Marketing When Things Change," *Harvard Business Review*. (Nov.-Dec. 1977), pp. 107-113.

[2] Stanley Hollander, "Retail Classifications Easy to Oversimplify," *Marketing News*, 13 (July 13, 1979). Gordon Bloom, "The Future of the Retail Food Industry: Another View," *Journal of Retailing*, 54 (Winter 1978): 3-14; Leonard Berry and Ian Wilson, "Retailing The Next Ten Years," *Journal of Retailing*, 53 (Fall 1977): 5-28.

[3] Valerie Bohigian, "Itching for a Bargain" *The American Way*, September 1981, pp. 106-111.

[4] Carl A. Bridenbaugh, "Marketing in Colonial Villages," in *Readings in the History of American Marketing: Settlements to Civil War*, American Marketing Association, eds. Stanley Shapiro and Allen Doody, (Homewood, Illinois: Richard D. Irwin Inc., 1968), pp. 15-28.

[5] Nabil Razzouk and David Gourley, "Swap Meets for Fun and Profit. The Retailing Institution of the 1980's" in *Developments in Marketing Science*, Vol. 4, eds., Venkata Krishna Bellur, et al., (Muncie, Indiana: Academy of Marketing Science, 1981), pp. 9-13.

[6] Management report of Park 'n Swap, Phoenix, Az., 1980.

[7] Kathy LaTour, "A Day at a Flea" *The American Way*, September 1981, 108-109.

[8] Management report of Park 'n Swap, Phoenix, Az. 1980.

[9] As reported in *Inside Phoenix* 1978 (Phoenix, Az. Phoenix Newspapers, Inc., 1978).

[10] Joseph R. Mason and Brooks S. Smith, "An Explanatory Note on the Shopping Behavior of Low Income Senior Citizens," *Journal of Consumer Affairs* (Winter 1974), pp. 204-209.

Changes in the Metropolitan Phoenix Consumer Price Index

Several changes have been made in the Metropolitan Phoenix Consumer Price Index effective with the fourth quarter, 1981.

The first adjustment is changing the base of the index from 1969 to 1977. The annual average for 1977 is the new base period, with the index for this period equal to 100. This change was made to match the change in the base period planned by the U.S. Bureau of Labor Statistics for the United States average and other cities, which was to have been implemented in January, 1982. However, the federal government has indefinitely postponed this change in base periods. When the federal government does change the base period to 1977, direct comparisons in index values for Metropolitan Phoenix and other areas will be possible for the first time.

The base period is revised approximately every ten years by the federal government in order to "facilitate" the visual comprehension of rates of change from a base period that is not too distant in time."[1] The shift changes the values of the indexes, but does not affect percentage changes calculated from these indexes, except for small differences due to rounding.

The complete history of the Metropolitan Phoenix CPI on the new 1977 base is published in this issue and users are urged to switch to the new base period as soon as is practical. The 1969 base index will continue to be published for a period of time as a convenience to users.

The second change involves the publication of information in the quarterly Metropolitan Phoenix CPI report. Certain categories, previously published, have been deleted from the new published report while other categories have been added. The purpose of these changes is to be more uniform in presenting categories that are of relatively major importance to the CPI. For example, gasoline has been added to the published report because of its relative importance as 4.3 percent of the overall CPI. Footwear was omitted since it has a relative importance of only 0.7 percent of the entire index. Information on any category no longer published is still available upon request.

The third change in the local CPI is the availability of data on detail CPI categories for the first time. A history of index values for detail categories, e.g., televisions, postage or auto tires, has been calculated, much as is done by the Bureau of Labor Statistics. This information will not be published, but is available upon request.

The fourth change involves the termination of the monthly food price index. Food items will be priced quarterly and presented in the quarterly CPI as are all other consumer items.

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[1] *CPI Detailed Report*, September, 1981, U.S. Department of Labor, Bureau of Labor Statistics.

Metropolitan Phoenix Consumer Price Index Using the 1977 Base Period

1969 through 1981
(1977=100)

							1975				1976				1977			
Group	*1969*	*1970*	*1971*	*1972*	*1973*	*1974*	I	II	III	IV	I	II	III	IV	I	II	III	IV
ALL ITEMS	64.4	67.1	70.6	72.2	77.8	84.2	85.7	87.1	88.9	91.3	91.2	92.1	93.6	94.9	96.8	99.0	101.2	103.0
Food and Beverages	•	•	•	•	•	•	•	•	•	•	93.0	92.5	94.2	94.0	96.6	98.9	101.8	102.6
Food	62.1	63.5	64.2	67.6	78.5	86.1	89.2	90.1	93.5	93.8	92.4	91.8	93.9	93.2	96.3	98.9	102.1	102.7
Food at Home	60.3	61.6	61.5	66.7	80.2	87.7	90.9	91.8	95.8	95.5	93.5	92.5	93.7	92.5	96.5	98.8	102.1	102.6
Cereals and Bakery Products	61.5	63.5	64.8	66.6	80.1	96.0	103.3	101.7	103.8	98.1	96.0	93.2	93.7	93.0	95.3	97.1	103.3	104.3
Meats, Poultry, Fish, Eggs	62.9	63.0	64.3	73.8	95.3	88.7	89.6	95.0	107.9	107.7	101.8	100.4	101.0	94.5	97.1	97.6	102.2	103.2
Dairy Products	66.4	69.4	66.0	67.6	80.1	87.0	89.5	90.5	91.1	94.9	96.6	95.7	97.3	97.7	97.8	99.1	101.2	102.0
Fruits and Vegetables	61.7	62.7	65.5	70.3	76.2	89.5	91.8	93.8	97.9	91.9	91.5	91.7	90.9	93.6	99.6	101.0	98.3	101.1
Other Foods at Home	51.6	53.7	51.8	54.7	63.0	81.3	86.6	81.9	78.8	80.8	80.7	80.6	83.8	85.6	93.4	99.7	104.3	102.5
Food Away From Home	68.1	69.8	73.1	70.4	72.9	81.1	83.5	84.6	86.1	88.0	89.0	89.5	94.6	95.7	95.9	99.3	102.1	102.7
Housing	69.0	69.9	71.7	72.4	76.6	83.8	85.5	87.1	88.7	91.9	91.3	92.3	93.3	94.8	96.7	99.3	101.1	102.9
Shelter	72.0	72.5	76.3	74.8	79.2	85.3	87.2	88.3	90.3	93.4	91.5	92.9	93.6	94.9	96.7	99.7	100.8	102.9
Rent, Residential	74.0	77.1	80.6	83.4	87.0	85.7	83.4	86.8	85.7	90.9	91.4	91.9	92.5	94.5	97.7	98.8	100.5	103.0
Homeownership	74.9	74.7	78.7	76.1	80.9	89.1	92.4	92.4	95.3	94.4	91.5	93.3	94.1	95.0	96.2	100.1	100.9	102.8
Financing, Taxes, Insurance	•	•	•	•	•	•	•	•	•	•	91.4	93.7	94.0	95.2	96.2	100.1	100.8	102.7
Mortgage Interest Rates	•	•	•	•	•	•	•	•	•	•	99.2	98.0	98.8	97.1	97.1	97.7	102.1	103.3
Home Purchase Price	•	•	•	•	•	•	•	•	•	•	91.0	94.0	93.9	95.9	97.3	101.4	99.9	101.3
Fuel and Other Utilities	50.2	52.9	53.0	61.2	66.6	74.0	74.0	73.8	75.1	85.4	87.7	86.5	90.1	91.9	96.2	97.0	103.7	103.1
Electricity and Utility Gas	•	•	•	•	•	•	•	•	•	•	83.7	81.7	86.6	89.3	94.2	95.4	105.6	104.9
Furnishings and Operations	64.6	66.1	61.3	67.6	90.6	82.3	83.8	90.1	90.3	89.6	92.6	93.0	94.1	95.9	96.9	98.7	101.4	103.0
Apparel and Upkeep	68.4	72.1	71.6	73.1	78.9	84.6	84.9	87.6	88.8	88.8	90.2	91.3	93.0	95.4	97.1	99.4	100.6	102.9
Transportation	60.1	62.1	72.4	71.9	80.9	84.9	86.3	84.9	87.0	88.8	91.8	92.7	94.1	95.6	97.9	99.9	100.4	101.8
Private Transportation	60.0	62.0	72.5	72.0	81.4	84.9	86.3	84.5	86.8	88.5	88.1	90.8	94.5	95.4	95.8	97.4	102.3	104.5
New and Used Cars	•	•	•	•	•	•	•	•	•	•	86.6	86.9	95.1	93.8	92.9	99.7	106.5	107.9
Gasoline	•	•	•	•	•	•	•	•	•	•	91.3	91.0	95.9	97.1	98.0	99.5	102.8	99.7
Public Transportation	61.8	64.4	69.5	69.5	69.5	83.3	85.4	88.6	88.8	90.3	91.8	92.7	93.0	94.6	95.8	96.6	101.0	106.6
Medical Care	45.5	60.6	70.8	74.6	75.1	77.7	82.1	83.7	87.1	89.7	91.8	92.7	94.1	95.6	97.9	99.9	100.4	101.8
Entertainment	68.8	67.9	78.0	78.7	79.3	86.4	89.7	89.6	87.5	90.8	91.8	92.7	94.1	95.6	98.3	99.8	100.3	101.6
Other Goods and Services	•	•	•	•	•	•	•	•	•	•	91.2	92.3	92.7	94.4	97.4	99.3	100.8	102.6

• A history of these groups is not available prior to 1976

Source: Bureau of Business and Economic Research, College of Business Administration, Arizona State University.

Metropolitan Phoenix Consumer Price Index
Using the 1977 Base Period

1969 through 1981 (Continued)
(1977=100)

Group	1978 I	1978 II	1978 III	1978 IV	1979 I	1979 II	1979 III	1979 IV	1980 I	1980 II	1980 III	1980 IV	1981 I	1981 II	1981 III	1981 IV
ALL ITEMS	105.4	108.6	111.7	114.9	118.5	124.8	128.2	133.0	142.2	142.3	146.0	150.7	155.4	158.3	161.9	165.5
Food and Beverages	105.3	110.7	112.6	113.8	117.1	121.2	123.0	125.2	129.5	132.6	137.0	140.8	144.6	146.8	149.3	149.8
Food	105.4	111.0	113.0	114.2	117.5	121.8	123.4	125.7	130.0	133.1	137.5	141.6	145.6	147.8	150.3	150.8
Food at Home	105.8	112.5	114.6	116.0	120.3	123.4	124.7	127.9	130.4	133.3	137.8	142.1	146.4	147.7	150.5	150.8
Cereals and Bakery Products	107.0	111.4	113.5	115.0	117.1	117.4	122.4	126.5	130.4	134.9	137.0	139.8	146.0	149.4	152.4	155.3
Meats, Poultry, Fish, Eggs	109.5	122.5	126.6	127.3	133.0	140.8	134.3	134.3	137.4	135.6	141.5	147.0	147.3	144.2	149.2	150.1
Dairy Products	102.6	104.7	106.3	112.2	117.4	119.7	123.3	128.2	129.6	132.2	134.4	139.5	144.1	146.5	146.8	146.6
Fruits and Vegetables	104.2	116.4	117.9	116.0	119.5	119.6	124.7	126.9	124.8	131.7	139.9	142.7	150.3	159.6	154.1	149.1
Other Foods at Home	103.0	102.1	102.1	104.2	108.4	110.1	113.7	118.9	122.8	127.4	130.4	134.1	139.5	140.1	140.7	142.1
Food Away From Home	104.2	106.2	107.7	108.4	110.3	117.0	119.1	119.8	127.4	130.9	134.9	138.5	141.8	145.6	147.6	148.5
Housing	106.0	108.5	113.6	117.8	123.0	132.2	136.1	142.9	155.2	153.7	157.5	163.5	168.6	173.2	178.6	183.3
Shelter	106.5	109.1	115.8	121.7	127.7	140.8	144.7	153.9	171.1	166.0	171.0	180.8	185.9	191.7	196.9	202.8
Rent, Residential	106.1	105.6	108.2	110.2	110.2	119.3	122.4	125.9	127.5	130.0	131.3	131.9	132.7	134.4	135.7	138.3
Homeownership	106.6	110.7	119.2	127.2	132.6	149.3	153.5	164.5	186.9	179.1	185.3	198.3	205.0	212.2	218.8	226.0
Financing, Taxes, Insurance	106.9	111.2	121.4	130.1	135.8	153.2	157.5	169.2	193.1	184.6	191.1	204.7	211.7	219.3	226.5	233.8
Mortgage Interest Rates	105.5	107.3	109.7	114.6	117.0	122.6	124.4	131.9	167.2	146.7	143.9	159.0	163.0	180.2	194.5	208.5
Home Purchase Price	105.1	109.5	120.0	127.8	133.0	148.4	152.7	160.8	167.7	166.5	172.7	177.5	183.0	181.9	183.5	184.3
Fuel and Other Utilities	102.3	104.2	104.7	98.7	102.7	102.2	110.9	112.2	113.3	123.2	126.4	118.8	124.4	126.3	134.4	136.0
Electricity and Utility Gas	103.8	106.9	107.0	94.4	102.0	99.7	115.3	117.8	118.6	137.8	141.8	124.1	133.7	135.7	147.9	143.8
Furnishings and Operations	105.7	107.7	108.4	110.2	113.1	114.2	114.1	116.2	119.5	120.8	121.4	123.9	127.9	130.1	133.1	135.8
Apparel and Upkeep	103.6	106.4	108.5	112.1	113.6	115.2	117.7	115.8	116.3	116.3	118.2	119.3	121.7	123.3	124.0	129.1
Transportation	106.0	107.9	108.8	112.9	114.4	119.8	125.1	132.0	143.4	143.0	145.8	149.3	157.4	159.4	161.2	164.0
Private Transportation	104.7	109.6	111.1	113.0	114.4	119.8	124.7	131.2	143.2	142.4	144.6	147.3	155.4	157.3	158.1	161.1
New and Used Cars	107.8	111.7	108.2	116.6	115.5	112.8	110.3	122.0	125.1	122.6	122.3	128.9	134.7	139.3	140.2	147.6
Gasoline	102.0	110.1	114.4	114.1	119.6	140.9	168.1	169.1	206.0	203.9	203.9	203.1	222.8	224.8	224.6	219.6
Public Transportation	109.8	110.3	111.1	112.4	114.2	119.3	131.3	144.3	147.1	153.8	160.9	185.2	191.9	198.6	222.4	217.1
Medical Care	106.0	107.9	108.8	112.9	115.8	118.1	121.6	129.6	134.2	136.0	141.2	144.3	146.5	147.5	152.1	156.6
Entertainment	105.7	106.6	107.5	112.2	113.5	115.0	117.5	115.2	125.4	126.1	130.0	139.0	141.2	141.8	144.8	150.6
Other Goods and Services	104.4	106.4	109.8	112.7	115.1	118.4	119.1	112.5	116.9	118.8	121.6	126.0	124.2	127.6	129.7	132.1

Source: Bureau of Business and Economic Research, College of Business Administration, Arizona State University.

METROPOLITAN PHOENIX CONSUMER PRICE INDEX USING THE 1977 BASE PERIOD

All Items 1969 Through 1981

(1977=100)

	Quarter					*Percentage Change*	
	I	*II*	*III*	*IV*	*Annual Average*	*Annual Average*	*Year End To Year End*
1969	—	—	—	64.4	—	—	—
1970	—	—	—	67.1	—	—	4.2
1971	—	—	—	70.6	—	—	5.2
1972	—	—	—	72.2	—	—	2.3
1973	—	—	—	77.8	—	—	7.8
1974	—	—	—	84.2	—	—	8.2
1975	85.7	87.1	88.9	91.3	88.2	—	8.4
1976	91.2	92.1	93.6	94.9	92.9	5.3	3.9
1977	96.8	99.0	101.2	103.0	100.0	7.6	8.5
1978	105.4	108.6	111.7	114.9	110.1	10.2	11.6
1979	118.5	124.8	128.2	133.0	126.1	14.5	15.8
1980	142.2	142.3	146.0	150.7	145.3	15.2	13.3
1981	155.4	158.3	161.9	165.5	160.3	10.3	9.8

Source: Bureau of Business and Economic Research, College of Business Administration, Arizona State University in cooperative cosponsorship with Valley National Bank.

Metropolitan Phoenix Consumer Price Index

FOURTH QUARTER, 1981

Prices of goods and services typically purchased by households in the Phoenix Metropolitan Area increased 2.2 percent during the fourth quarter of 1981, slightly less than the 2.3 percent increase during the year's third quarter. Over the past year, the increase in Metropolitan Phoenix Area prices was 9.8 percent. Most analysts expect this return to single-digit inflation rates to continue through 1982.

The Consumer Price Index (CPI) for the Phoenix Metropolitan Area, on which these inflation measures are based, is prepared by the Bureau of Business and Economic Research, College of Business Administration, at Arizona State University. The quarterly CPI is based on comprehensive surveys conducted by the Bureau in cooperative cosponsorship with Valley National Bank.

The *Food* category remained relatively unchanged this quarter, increasing 0.4 percent, the smallest increase since the fourth quarter of 1977. This continues the slowing trend in price increases in the *Food* category experienced over the past six quarters. Food at Home (grocery items) experienced a minimal increase of 0.2 percent. Cereals and Bakery Products posted a 2.0 percent increase, the smallest since the second quarter of 1979. The main moderating factor was the cereal subgroup, which increased only 0.4 percent. Cookies, fresh biscuits, rolls, cake and cupcakes were the major contributors to a 2.6 percent rise in the bakery products subgroup. This gain in Cereals and Bakery Products was more than offset by a 3.2 percent decrease in Fruits and Vegetables, the largest quarterly decline since the fourth quarter of 1975, mainly due to large price decreases of 6.5 percent in fresh fruit and 10.5 percent in fresh vegetables. However, prices for processed fruits and processed vegetables increased during the fourth quarter.

Meats, Poultry, Fish, and Eggs increased slightly, with a 0.7 percent gain. The largest quarterly gain in this category was for egg prices, which rose 9.7 percent. Due to declining prices in early quarters, this quarterly increase in egg prices was larger than the overall change since one year ago (4.2 percent). The largest decline in the category of Meats, Poultry, Fish, and Eggs was the 4.5 percent registered by poultry. Decreasing beef, poultry, and fish/seafood prices offset both the 2.6 percent increase in pork prices and the 2.9 percent increase in other meats, such as frankfurters, bologna, and luncheon meats. This small quarterly increase in Meats, Poultry, Fish, and Eggs continues the trend of recent quarters: The increase in this category compared to one year ago is only 2.2 percent while both beef and poultry prices are now lower than one year ago.

For the second successive quarter, Dairy Products remained virtually unchanged during the fourth quarter. The last previous quarter of stability in dairy prices was the first quarter of 1977. Decreasing prices for fresh milk and cream were balanced by increases in other dairy products such as butter, cheese, and ice cream.

Other Food at Home increased 1.0 percent as a result of mixed price changes. Price decreases for fats and oils, and sugar and other sweets partially offset the 2.8 percent increase in miscellaneous prepared foods such as frozen prepared food, nuts, potato chips, and other snack items.

Quarterly increases in Food Away From Home have been progressively smaller each quarter since the third quarter of 1980. This quarter's increase was 0.6 percent, the smallest since the fourth quarter of 1979.

The price index for *Housing* increased 2.7 percent in the fourth quarter, approximately the same rate as in the previous three quarters. Mortgage Interest Rates continued to increase rapidly early in the quarter, leading to a 7.2 percent change this quarter, the largest increase in the *Housing* category. Mortgage interest rates are now 31.2 percent above a year earlier. Moderating their effect were home purchase prices, which continued to increase slowly at 0.5 percent; this quarter's home prices are only 3.9 percent above a year earlier. The overall quarterly increase of 3.3 percent in homeownership was moderated by lesser increases in the other *Housing* categories. Residential rent increased only 1.9 percent, although this was still a larger increase than in the five previous quarters. Fuel and Other Utilities increased 1.2 percent, a rate lower than that of the previous three quarters of this year. A decrease in electrical power rates helped offset increases in certain telephone rates and in water and sewerage maintenance charges. Despite the quarterly 4.1 percent decline in costs of electricity, these costs are 21.6 percent above those of one year earlier. Household Furnishings and Operations, the other category within *Housing*, increased 2.1 percent. A sizable price increase in textile home furnishings (15.3 percent) followed three successive quarters of declining prices. Lower prices for television, radio, and sound equipment and for other household equipment helped to minimize the impact of this large change.

Apparel and Upkeep increased 4.2 percent, the largest quarterly increase since the index began in 1975. This category increased more than the overall Consumer Price Index primarily because of the increase in Women's and Girls' Apparel (7.1 percent), led by increases of 8.0 percent in women's apparel. Also contributing to the *Apparel and Upkeep* increase were the 6.2 percent increase in prices for footwear, and the 10.8 percent increase in apparel for infants and toddlers.

Transportation costs in the Phoenix area increased 1.8 percent in this quarter. Private Transportation increased 2.0 percent, led by a 5.3 percent increase in new and used cars, largely a seasonal increase due to the introduction of the new model year. Used car prices also increased at a relatively high rate for the fourth straight quarter, however, with prices 22.3 percent higher than a year earlier. The effects of new car and used car price increases of 6.5 percent and 4.2 percent respectively were tempered by a 2.2 percent decrease for gasoline, motor oil, coolant, and similar products, as well as the 2.6 percent decrease in vehicle parts and equipment prices. Despite a quarterly increase of 3.0 percent, automobile insurance posted a 3.4 percent decline over the last year. A decrease of 4.7 percent in airline fares was the primary contributor to the Public Transportation decrease of 2.3 percent. This is the first quarterly decrease ever posted in Public Transportation in the Metropolitan Phoenix CPI, and follows ten successive quarters of large increases. Nevertheless, Public Transportation rose 17.3 percent over the past year despite the decline in this quarter.

Medical Care in the Phoenix area rose 3.0 percent in the fourth quarter. Nonprescription drugs and medical supplies increased 5.7 percent, the largest increase since the first quarter of 1979. Health insurance also showed a large increase of 4.3 percent, while physicians' fees increased for the first time in six quarters. Hospital and other medical services moderated the quarterly increase in *Medical Care* by remaining unchanged this quarter, but the annual increase in these costs has been 14.8 percent.

Entertainment costs increased during the fourth quarter by 4.0 percent. Significant price increases in this category included admissions, fees, and other entertainment services at 6.6 percent, and sporting goods and equipment at 6.4 percent. Reading materials had a moderating effect with a decrease of 6.7 percent.

Other Goods and Services increased 2.0 percent in the fourth quarter. Personal care remained essentially unchanged at 0.1 percent; toilet articles and personal care appliances declined 1.5 percent. Expenses for personal services, including banking, accounting, legal and funeral costs increased 9.4 percent.

The 2.2 percent quarterly Consumer Price Index increase for Phoenix is larger than the 1.5 percent increase for the United States as a whole, and larger than Chicago's 0.4 percent increase, but it was less than the Los Angeles increase (2.5 percent). The accompanying tables show detailed comparisons between Phoenix, Chicago, Los Angeles, and the nation. In general, the quarterly increases in Phoenix are higher than those for Chicago and the United States, but less than in Los Angeles for most categories. Exceptions include the categories of *Apparel and Upkeep* and *Entertainment*, in which Phoenix has had larger increases than the comparison areas, and the *Transportation* and *Other Goods and Services* categories, in which Phoenix experienced lower increases than all comparison areas.

The percentage change from one year ago in Phoenix is comparable to the United States (9.6 percent) and Los Angeles (10.3 percent), and higher than that of Chicago (6.6 percent). The one-year increase in the Phoenix Metropolitan Area has been larger than in all the comparison areas for *Food, Housing, Apparel and Upkeep*, and *Entertainment*. In the categories of *Transportation, Medical Care*, and *Other Goods and Services*, the increases over the past year in Phoenix have been less than in all comparison areas.

METROPOLITAN PHOENIX CONSUMER PRICE INDEX
FOURTH QUARTER, 1981

(1977=100)

Group	*Third Qtr. 1981 Index*	*Fourth Qtr. 1981 Index*	*Percentage Change From Last Quarter*	*Percentage Change From One Year Ago*	*1969 Base Index*
ALL ITEMS	161.9	165.5	2.2	9.8	257.0
Food and Beverages	149.3	149.9	0.4	6.5	234.1
Food	150.3	150.8	0.4	6.5	239.7
Food at Home	150.5	150.9	0.2	6.2	250.3
Cereals and Bakery Products	152.4	155.4	2.0	11.2	252.6
Meats, Poultry, Fish, Eggs	149.2	150.2	0.7	2.2	238.7
Dairy Products	146.8	146.7	-0.0	5.2	221.4
Fruits and Vegetables	154.1	149.1	-3.2	4.5	257.2
Other Foods at Home	140.7	142.1	1.0	6.0	275.2
Food Away From Home	147.6	148.5	0.6	7.2	218.0
Housing	178.6	183.4	2.7	12.1	265.2
Shelter	196.9	202.8	3.0	12.2	281.5
Rent, Residential	135.7	138.3	1.9	4.8	187.1
Homeownership	218.8	226.0	3.3	14.0	301.7
Financing, Taxes, Insurance	226.5	233.9	3.3	14.3	•
Mortgage Interest Rates	194.5	208.5	7.2	31.2	•
Home Purchase Price	183.5	184.3	0.5	3.9	•
Fuel and Other Utilities	134.4	136.0	1.2	14.4	270.9
Electricity and Utility Gas	147.9	143.9	-2.7	16.0	•
Furnishings and Operations	133.1	135.9	2.1	9.7	210.1
Apparel and Upkeep	124.0	129.2	4.2	8.3	188.3
Transportation	161.2	164.0	1.8	9.9	272.8
Private Transportation	158.1	161.2	2.0	9.5	268.4
New and Used Cars	140.2	147.6	5.3	14.5	•
Gasoline	224.6	219.7	-2.2	8.2	•
Public Transportation	222.4	217.2	-2.3	17.3	351.1
Medical Care	152.1	156.7	3.0	8.6	344.6
Entertainment	144.8	150.6	4.0	8.3	219.1
Other Goods and Services	129.7	132.2	2.0	5.0	237.4

• 1969 base index is not available.

UNITED STATES AND COMPARATIVE CITIES

Group	*United States*		*Chicago*		*Los Angeles*	
	Percentage Change From Last Quarter	*Percentage Change From One Year Ago*	*Percentage Change From Last Quarter*	*Percentage Change From One Year Ago*	*Percentage Change From Last Quarter*	*Percentage Change From One Year Ago*
ALL ITEMS	1.5	9.6	0.4	6.6	2.5	10.3
Food	-0.1	4.8	-0.6	2.3	0.0	5.4
Food at Home	-0.7	3.4	-1.0	1.7	-0.6	4.6
Food Away From Home	1.2	8.0	0.4	5.6	1.2	6.8
Housing	1.5	11.1	-0.5	5.4	3.7	11.8
Shelter	1.6	11.0	-0.3	2.9	4.0	12.9
Fuel and Utilities	0.6	15.4	-4.7	15.9	2.9	10.6
Household Furnishings & Operations	1.9	7.7	2.1	8.5	2.4	6.8
Apparel and Upkeep	2.1	3.5	1.8	2.6	0.9	2.7
Transportation	1.9	11.6	2.3	12.2	2.7	11.6
Medical Care	3.0	12.3	1.1	11.8	4.2	17.9
Entertainment	2.0	7.4	1.2	8.0	0.2	7.0
Other Goods and Services	4.4	10.4	3.5	10.2	2.0	10.9

Source: Metropolitan Phoenix data compiled by the Bureau of Business and Economic Research, College of Business Administration, Arizona State University, in cooperative cosponsorship with Valley National Bank; other data from U.S. Department of Labor, Bureau of Labor Statistics, Washington, D. C.

The Arizona Business Scene

1912

The Verde Valley

The Verde Valley is located in Yavapai County near the geographic center of Arizona, approximately 100 miles due north of Phoenix. The Verde River, one of the state's largest, begins northwest of the valley, runs southeast through the valley, then turns south to join with the Salt River east of the Phoenix area. The elevation of the Verde Valley is approximately 3,300 feet, resulting in temperatures 5 to 10 degrees cooler than in Phoenix, and with somewhat heavier rainfall. The valley is surrounded by national forests and higher mountainous and plateau areas. Access to the valley is primarily by two highways—Interstate 17 and U.S. Highway 89A, that run diagonally through the valley from the southwest.

Communities located in the valley include Jerome, Clarkdale, Cottonwood, Camp Verde, McGuireville, Lake Montezuma, Rimrock, Bridgeport, Cornville, Page Springs, Oak Creek, and Sedona: the largest are Cottonwood and Sedona. Populations of incorporated towns and census designated places are shown in Table 1. The area is growing rapidly.

Development of the Verde Valley began in 1865 with the establishment of Camp Verde (originally called Camp Lincoln) which was assigned the task of protecting early settlers from Indian raids. The first settlers were farmers and ranchers who used the Verde River for their water needs. In the 1880s mining became a major industry, centered in Jerome. In the 1910s a smelter was located at Clarkdale, stimulating development of that area. The importance of mining and agriculture are greatly diminished today, as the Verde Valley has evolved into a trade and service dominated economy.

TABLE 1

POPULATION OF TOWNS IN THE VERDE VALLEY

	1980	*1970*	*Percent Change*
Camp Verde	1,125	NA	NA
Clarkdale	1,512	892	69.5
Cottonwood	4,550	2,610	74.3
Jerome	420	290	44.8
Sedona	5,368	NA	NA

NA: Not available

Source: United States Bureau of the Census.

The dominance of the trade and services sectors in the Verde Valley economy is due to two primary reasons. The first reason relates to the large percentage of retirement age people in the area's population: 26 percent are 65 or over (in contrast, only 11 percent of the Metropolitan Phoenix population is 65 or over). These retirees are consumers of goods and services, but contribute minimally to the area's work force. Thus, a larger proportion of the working age population is involved in the trade and services sectors than would otherwise be expected.

The second reason for the dominance of the trade and services sectors is the importance of tourism to the local economy. As in the case of retirees, tourists create a demand for goods and services, without contributing to the area's work force. In addition to the national forests that attract campers, fishers, and hunters, the area also has a number of other tourist attractions, including Fort Verde State Park, Montezuma Castle and Montezuma Well National Monuments, Jerome State Historical Park, Dead Horse State Historical Park , and Tuzigoot National Monument. Arts and crafts shops in Jerome and Sedona also attract tourists, as does the beauty of Oak Creek Canyon.

The area, particularly Sedona and Oak Creek Canyon, is one of the state's prime destinations for out-of-state tourists. These tourists spent an estimated total of $61.1 million in Yavapai County in the 1979-1980 fiscal year. Much of this total was spent in the Verde Valley, since the Prescott area is the only other large population center in the county.

The employment structure of the Verde Valley as a whole, compared to that of the entire state, is shown in Table 2. The importance of the retail trade and services sectors in Verde Valley is shown by the fact that nearly two-thirds of the work force is employed in those two sectors, compared to less than 40 percent statewide. Nearly every other employment sector has a smaller proportion of the work force in the Verde Valley than statewide; the difference is especially apparent in the manufacturing and construction sectors.

Although the economy of the Verde Valley can be characterized as service and trade oriented with a moderate sized government sector and very little manufacturing, this structure cannot be applied equally to each of the valley's communities. Each of the major communities has its own unique characteristics.

Camp Verde is located on the Verde River at the southeast end of the valley. Although its residents are primarily employed in the trade, services, and government sectors, it is more of a ranching and farming community than the other valley communities.

Cottonwood is located in the center of the valley, along the Verde River. This central location has made Cottonwood the trade center of the valley, especially for retail trade and professional services. Cottonwood does have a relatively large apparel manufacturing firm.

Clarkdale, just northwest of Cottonwood, was originally the services center for the mining area around it. It remains a services center today despite the decline of mining. Manufacturing is also important with a large cement manufacturing plant located here.

TABLE 2

EMPLOYMENT COMPARISON
PERCENTAGE OF POPULATION

	Verde Valley	*Arizona*
Agriculture and Mining	*	4
Construction	4	9
Manufacturing	2	15
Transportation, Communication, Public Utilities	2	5
Wholesale Trade	4	5
Retail Trade	35	19
Finance, Insurance, Real Estate	6	6
Services	30	19
Public Administration	16	19

*Less than .5 percent

Sources: Arizona Department of Economic Security, 1979, for Arizona; Arizona Office of Economic Planning and Development, 1976, for Verde Valley.

Jerome is the most unusual of the valley's communities. It is located part way up the side of the steep Mingus Mountain which forms the southwest boundary of the Verde Valley. There is a 1,500 foot difference in elevation within Jerome itself; the mountains reach a peak of 7,700 feet above Jerome. This was an important mining town from the 1880s until 1953 when the mine was closed, ending its production of copper, gold, silver, and zinc. Jerome's population dropped from approximately 15,000 at its peak to nearly zero, earning the title of the "world's largest ghost city." Today it is being resettled by artists and artisans who are renovating many of the community's old structures. Its economy today is based almost entirely on tourism.

Sedona is the largest town in the valley, located on higher ground at the northeast edge of the valley. It is at the south entrance to Oak Creek Canyon, considered by many to be one of the most beautiful spots in Arizona. Oak Creek, a tributary of the Verde River, runs through town. Writers and artists are attracted to the area's climate and scenic wonders, as are retirees. Sedona is an affluent area characterized as a retail and services center, with a relatively large finance, insurance, and real estate sector.

Thus, the Verde Valley has several communities, each with its own unique characteristics. As a whole, the Verde Valley is likely to continue to attract retirees and tourists, mainstays of its economy.

A Survey of Arizona Business Conditions

HAROLD FEARON

The downturn in business activity continued an even faster descent, and new 1981 lows were reached in December, according to results from the monthly business survey of the Purchasing Management Association of Arizona and the Purchasing Management Association of Southern Arizona. The slide, which began in June of 1981, is in its seventh month and already has dropped the economy further and lasted longer than the slight downturn in the middle of 1980. How much further it will go is not clear, though it is clear that the economy is in a steep decline. The only good news is that inflation continues to moderate; December's rate of increase was the smallest in over six years.

The purchasing business survey now is in its twentieth year of consecutive monthly reporting on the current status of the Arizona economy. Data are gathered through a questionnaire sent at the close of each month to purchasing managers throughout the state, asking them to indicate the direction of activity—higher, unchanged, or lower—on six key indicators of economic activity in the month just ended. Since these purchasing managers deal daily with the forces of supply and demand, they are able to provide timely and accurate information on current business trends, which enables economic turning points to be spotted.

Prices paid for major purchased items went up again in December, but at a lower rate than in November and the lowest rate of any of the months of 1981. The December monthly increase rate was only about one-third that of last January, and lowest in over six years—since August, 1975. Thirty-one percent of the purchasing managers paid higher prices in December; 61 percent saw prices unchanged; while 8 percent paid lower prices in December than in November. The closely controlled money supply and high interest rates are rapidly bringing inflation under control. If this trend continues for another few months, the inflation rate will be down to a very realistic level, and the economy will be poised for a turnaround and a resumption of long-term sustainable growth.

Delivery time on shipments from vendors dropped for the second month in a row, and the decline was much larger in December than in November. Longer delivery times were reported by 22 percent of the firms, but 29 percent enjoyed faster service from their suppliers. The unused vendor capacity caused by the slowdown is permitting vendors to fill orders faster, a trend that will continue until economic activity reaches a low point and begins to rebound.

Inventory levels of purchased materials dropped again, and at the same rate as in the previous month. December saw the tenth consecutive monthly decline, as 18 percent of the firms added inventory and a large 41 percent cut stocks. This is a normal response to the poor new order and production performance and the high inventory carrying costs, causing Arizona firms to

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reduce inventory rapidly and consistently. It appears that this timely action to pare inventory investment may have prevented a major imbalance between sales and inventories, thus avoiding extreme downward pressures of enforced stock reductions and setting the stage for the recovery.

New orders received from customers continued to fall for the fifth consecutive month. The December decrease was at a rate almost three times as great as in November and the largest one-month drop in seven years—since December of 1974. Only 17 percent of the firms enjoyed an increase in order bookings, compared to the 51 percent who saw their new order books shrink. This precipitous drop in customer demand almost assures that the economic recovery still is several months away.

Production of Arizona firms fell again, for the third month in a row, and at a much larger rate than in November. This was the largest one-month decrease in over six years—since February of 1975. Further large drops will occur until such time as the new order rate bottoms out and turns around.

Employment registered a major drop, the largest since February, 1975. Only 6 percent of the firms added to their work force; 38 percent pared payrolls. This was the seventh consecutive monthly drop, and one has to go back to 1975 to find a period when employment fell seven months in a row. Certainly the employment reductions in the copper industry were a major factor in the negative performance of the employee indicator.

The special question, asked each December, covering *anticipated* expenditures for new plant and equipment during 1982 indicates that no increase in investment is on the horizon. The rate of capital expenditure in 1982 is anticipated to remain the same as in 1981. This is the first year since 1974 that firms did not forecast an increase in capital spending, and it reflects the current uncertainty concerning next year's business climate.

When asked to compare capital expenditures anticipated for 1982 with those actually made in 1981, 40 percent said their firm would spend more; 19 percent expect no change; and 41 percent forecast a decline. The results from this special question over the past eight years are shown in Table 1.

Thus, the Arizona economy is finishing out the year on a negative note. Should this rapid slide continue into the first quarter, the recession easily could reach the proportions of the major recession of 1974. Capital spending plans are not encouraging either, for they do not suggest any major investment boost for the economy. Yet, the moderating inflation trend is a positive sign and, coupled with the announced tax reduction measures, hopefully will bolster business and consumer confidence sufficiently to begin slowing the downslide and to plant the seeds for the needed turnaround. It is doubtful, however, if the trough in the current economic cycle will be reached before the end of the first quarter of 1982.

The results of the December purchasing survey are show in Table 2.

TABLE 1

ANTICIPATED EXPENDITURES FOR NEW PLANT AND EQUIPMENT

Expenditures anticipated for new plant and equipment	*Percentage* *Higher*	*Same*	*Lower*
1982 compared to 1981	40	19	41
1981 compared to 1980	49	27	24
1980 compared to 1979	54	29	17
1979 compared to 1978	55	28	17
1978 compared to 1977	54	30	16
1977 compared to 1976	48	37	15
1976 compared to 1975	41	28	31
1975 compared to 1974	21	31	48

Source: Purchasing Management Association of Arizona and Purchasing Management Association of Southern Arizona.

TABLE 2

DECEMBER PURCHASING SURVEY

	Percent of Purchasing Managers Indicating Each Response (December compared to November)		
Key Indicators	*Higher*	*Same*	*Lower*
Price paid for major commodities	31	61	8
Delivery time from vendors	22	49	29
Purchased materials inventory level	18	41	41
New orders received	17	32	51
Production	21	35	44
Employment	6	56	38

Source: Purchasing Management Association and Purchasing Management Association of Southern Arizona.

Retail Food Prices

DECEMBER, 1981

Retail food prices fell 0.1 percent in December, marking the fourth consecutive month of stable or slightly decreasing prices. This is the first time since April, 1976, that overall food prices have experienced a four-month period without an increase.

The food price survey is compiled by the Bureau of Business and Economic Research, College of Business Administration, at Arizona State University. Cosponsor of the study is Valley National Bank. The December index of 267.5 indicates that shoppers would now have to pay $26.75 for a basket of foods that would have cost $10.00 in 1967. These foods could have been purchased for $25.56 one year ago. The December, 1981, index reflects only a 4.7 percent increase over the December, 1980, value, the lowest yearly change since February, 1977.

Decreases were noted in three of the five subgroups: *Dairy Products* declined 2.2 percent, followed by *Other Foods* (-1.3 percent), and *Meats, Poultry, Fish, and Eggs* (-.4 percent). Partially offsetting these decreases were increases for *Cereals and Bakery Products* (.6 percent) and *Fruits and Vegetables* (4.3 percent).

A large decrease of 9.2 percent in fresh milk and cream (other than whole milk) led the drop in prices in *Dairy Products*. Cheese (-1.5 percent) and ice cream and related products (-1.6 percent) also showed price decreases. Butter had the largest rise in price of .6 percent.

Lower prices for carbonated beverages led the decrease in prices of *Other Foods*. Cola drinks showed a 6.3 percent decrease in price, while other carbonated beverages dropped 9.1 percent. The category of nondairy substitutes, imitation milk, and peanut butter had a drop in price of 3.6 percent, led by decreases in the price of peanut butter, which has not shown an increase since April, 1981. A number of price increases partially offset these price decreases: Sugar and artificial sweeteners increased 3.5 percent and candy and gum increased 1.9 percent. The cost of margarine was up 2.3 percent.

Price decreases in beef, eggs, and fish and seafood more than counteracted price increases in poultry, pork, and other meats, leading to the decrease in *Meats, Poultry, Fish, and Eggs*. In the beef category declining prices included ground beef (-14.1 percent), chuck roast (-4.0 percent), round roast (-3.9 percent), and sirloin steak (-4.6 percent). The only beef category with a notable increase (9.6 percent), was roast other than chuck and round, and was merely a return to normal prices from the several sales that occurred in November. Both fresh and frozen fish and shellfish (-5.7 percent) and canned fish and seafood (-2.2 percent) posted declines.

All poultry items increased, led by fresh whole chicken (5.7 percent), offsetting the price decreases of November. Nearly every pork item had a price increase, led by an 11.0 percent increase in sausage, which more than offset the decrease in sausage prices in November. Most of the items in the other meats category also increased in price, with lamb and organ meats showing the greatest increase at 4.8 percent.

The increase in the subgroup of *Cereals and Bakery Products* was largely due to cereal prices, up 4.9 percent, and the category of fresh pie and frozen and refrigerated bakery products, also up 4.9 percent. Decreases were shown for the category of crackers, stuffing, bread/cracker crumbs, and meal (-5.3 percent) and fresh cake and cupcakes (-3.2 percent). These decreases more than counterbalanced increases in these two categories last month.

The subgroup of *Fruits and Vegetables* showed the largest increase this month, due to higher prices for fresh vegetables and fresh fruits; however, processed vegetables and processed fruits both had slight decreases. The increase in fresh vegetable prices was led by lettuce, up 34.8 percent, and tomatoes, up 11.8 percent. Apples (13.1 percent) and bananas (8.8 percent) had the largest gains of the fresh fruits. The largest declines came in the category of canned and dried vegetables other than beans and corn (-1.0 percent) and frozen fruit and fruit juices (-.9 percent).

A comparison of November, 1981, Food Consumed at Home for Maricopa County with index values for four selected metropolitan areas reveals that the outlays required to purchase a food group in November, 1981 (obtainable for an outlay of $10.00 at 1967 average prices) were $26.77 in Maricopa County; $27.19 in Los Angeles; $27.12 in San Francisco; $26.78 in Chicago and averaged $27.10 in the United States.

TABLE 1

INDEX FOR FOOD CONSUMED AT HOME

Maricopa County, United States, and Selected Metropolitan Areas
(Average 1967 = 100 percent)

Group	*Maricopa County Dec. '81*[a]	*Maricopa County Nov. '81*[b]	*United States* Nov. '81*	*Los Angeles* Nov. '81*	*San Francisco* Nov. '81*	*Chicago* Nov. '81*
Food Consumed at Home	267.5	267.7	271.0	271.9	271.2	267.8
Cereals and Bakery Products	263.5	261.9	276.3	286.6	283.3	277.2
Meats, Poultry, Fish, and Eggs	265.3	266.4	254.2	252.0	254.7	254.2
Dairy Products	230.1	235.4	245.0	239.2	237.3	237.9
Fruits and Vegetables	268.3	257.2	272.0	264.7	262.4	268.2
Other Foods Consumed at Home	293.2	297.0	326.0	332.5	339.8	325.1

*Computed from data contained in *The Consumer Price Index*, U.S. Department of Labor, Bureau of Labor Statistics, Washington, D.C. Prices pertain to the metropolitan area, which includes adjacent suburbs.

[a] Maricopa County food prices are reported for the month closest to publication.

[b] Comparisons of food prices among various cities and the United States average are made on the basis of earlier months because of the lag in collecting price reports from these other areas.

Note: Index comparisons between Maricopa County and the other regions show only that food prices in Maricopa County have increased more or less than food prices in the other regions since 1967. The indices cannot be used to determine the actual differences in food price levels between the regions.

Source: Bureau of Business and Economic Research, College of Business Administration, Arizona State University, in cooperative cosponsorship with Valley National Bank.

ARIZONA SALES OF ELECTRICAL POWER

	November 1981	*November 1980*	*One Year Percentage Change*	*November 1981*	*October 1981*	*One Month Percentage Change*
Sales of Kilowatt Hours (Thousands)	2274.7	2092.4	8.7	2274.7	2404.5	5.4

	December 1981	*December 1980*	*One Year Percentage Change*	*December 1981*	*November 1981*	*One Month Percentage Change*
Sales of Kilowatt Hours (Thousands)	2393.5	2275.5	5.2	2393.5	2274.7	5.2

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April 1982

ARIZONA BUSINESS

1981 in Review: Consumer Prices, Food, Construction

Bureau of Business and Economic Research
College of Business Administration
Arizona State University

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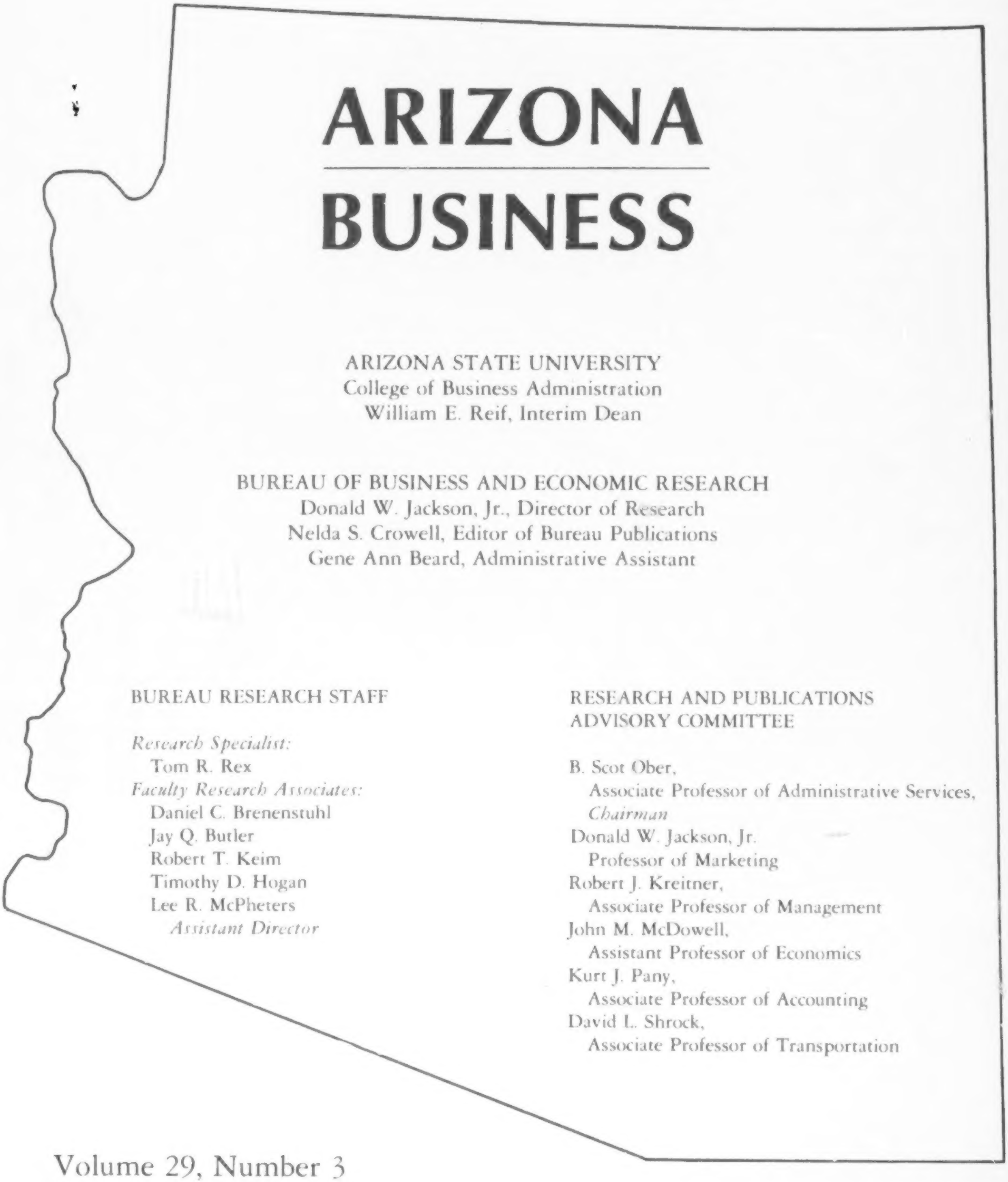

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Report To The Reader

In describing local economic activity during 1981, experts use such terms as "moderating," "leveling," "stagnating," or "slowing." This issue of *Arizona Business* presents the year-end review of three major studies done throughout the year by the Bureau of Business and Economic Research in the College of Business Administration, Arizona State University.

An easing of inflation was clearly evident in the Consumer Price Index, which showed an average increase of 10.3 percent in 1981, in contrast to the alarming 15.2 percent increase of 1980. This figure is very similar to the U.S. city average of 10.4 percent but higher than the increases reported for Los Angeles (9.7 percent) and Chicago (9.6 percent).

Housing, which rose 11.7 percent, was again the major contributor to the CPI increase, but compared to the 1981 increase of 17.9 percent, it exercised an important moderating effect.

Transportation also presented a vivid contrast to the previous year with a 1981 increase of 10.4 percent compared to the 1980 increase of 18.4 percent.

Retail food prices, which were expected to increase sharply, maintained a 9.5 percent increase, identical to the 1980 increase. Contrary to expectations, farm prices declined, mainly due to a larger supply of livestock than expected and timely rains that produced good crops. The major rise in food prices came from food marketing costs, which comprise about two-thirds of the retail price of food.

Construction activity, particularly the residential sector, was hard hit during 1981. Pima County experienced a 42 percent decline in single-family permits, while Maricopa County fared comparatively better with a decline of 3 percent.

The most active area in Maricopa County occurred in office building permits, which increased 43 percent. Although a similar pattern occurred in Pima County, the most dominant growth there was the retail sector.

Editor's Note: *Budget cuts, which necessitated combining the February and March issues of* Arizona Business, *resulted from the Governor's reductions in state agency budgets due to the current shortage of state revenues precipitated by the sluggish economy. They were not the result of legislative action, as previously suggested.*

Phoenix Inflation Moderates in 1981

TIMOTHY D. HOGAN
CYNTHIA M. JANSEN
CHRIS A. LOCKWOOD

Consumer prices in the Phoenix area showed an average increase of 10.3 percent in 1981. This substantial moderation in consumer prices is a welcome change after five consecutive years during which the annual average rate of inflation in the Metropolitan Phoenix Consumer Price Index accelerated from a 5.8 percent increase in 1976 to the peak rate of 15.2 percent in 1980. With continued anti-inflationary monetary policy and weak economic conditions through at least the first half of the year, it is very likely that the rate of increase in Phoenix area prices will continue to moderate during 1982 and beyond. This article details the pattern of consumer price increases to explain why inflation eased during 1981.

Phoenix area price trends are also compared with national patterns and with the inflation rates recorded in other areas of the country. In addition, forecasts of probable consumer price trends during 1982 are presented, and some of the reasons for the forecasts of continuing winding down of inflationary pressures are analyzed. In the final section, two changes in the Consumer Price Index are discussed: the use of 1977 as the base year for calculation of the index, and the major revisions in the methodology relating to homeownership costs.

BACKGROUND ON THE PHOENIX CPI

The United States Bureau of Labor Statistics (BLS) has, for more than sixty years, compiled the statistical measure most often used to measure inflation—the Consumer Price Index. The BLS now conducts price surveys in eighty-five urban areas throughout the United States and produces a national Consumer Price Index (CPI) as well as local indexes for twenty-eight metropolitan areas in the country.

Because Phoenix has never been one of the urban areas surveyed by the BLS, the Bureau of Business and Economic Research at Arizona State University developed a Metropolitan Phoenix CPI in 1974. The methodology for the Phoenix CPI was developed with the help of the BLS and is consistent with the methodology used in producing the national index. Quarterly CPI figures have been compiled by the Bureau since 1975.[1] Cosponsor of the current CPI study is Valley National Bank.

Before examining what happened to Phoenix area consumer prices during 1981, it is important to discuss

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Six of the seven major categories in the Consumer Price Index rose much slower in 1981 than in 1980. Many experts feel that the outlook on inflation is better than it has been for the past five years. The Index is compiled by the Bureau of Business and Economic Research, College of Business Administration, Arizona State University. Cosponsor is Valley National Bank.

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what the CPI does measure as well as what it does not measure. As its name implies, the Consumer Price Index measures changes in the prices of goods and services typically purchased by consumers. It compares the given cost of a fixed market basket of goods and services in a given time period with the cost of purchasing the same market basket during a particular base period.

The CPI is the statistical measure most often used to monitor inflation. Specifically, what is commonly termed "the inflation rate" for a given period is frequently derived by computing the annualized percentage change in the CPI for that period. For example, if the CPI were to increase to 220 from a level of 200 a year previous, the annual rate of inflation in consumer prices would be 10 percent during that year (the index increased 20 points during the year from an initial level of 200—a 10 percent increase).

Several different methods can be used to calculate the inflation rate for a year. One method is to use the annual average percentage change, which in the Phoenix area resulted in a 10.3 percent inflation rate. This is the method used in this article. The process involves averaging the four quarterly index values for a given year and comparing this average to the average of the previous year. The national index, which is monthly however, uses the twelve monthly indexes to compute the average.

The second method of calculating the inflation rate is simply to compute the percentage difference between the index value at the end of the year and the index value at the end of the previous year. This is the method used in the quarterly CPI reports published in *Arizona Business*. Thus, in 1981 in Phoenix, the annual average percent change was 10.3 percent, but the change from the end of 1980 to the end of 1981 was only 9.8 percent.

A third method of calculating the inflation rate is not used in Phoenix, but is frequently used with the national index. This method involves computing the inflation rate for one month into an annual rate by multiplying the one month percentage change by twelve, at a compounded rate. Thus, it is possible to have three very different inflation rates expressed at the same time.

When first published by the United States Bureau of Labor Statistics, the CPI was called a cost-of-living index rather than a price index, and it is widely used as a measure of changes in living costs. This use of the CPI as a cost-of-living index has led to increasing controversy concerning its accuracy as a measure of inflation. Because it has been designed to measure price changes in a representative market basket of goods and services purchased by consumers, the CPI is not really a cost-of-living index. The Consumer Price Index does not include changes in significant components of most households' living costs—most notably income and Social Security taxes. With its fixed market basket, the CPI also does not reflect changes over time in consumer taste or product offerings. The CPI measures changes in consumer prices, but the way those price changes affect each household's living costs depends on how that household chooses to spend its income.

It should also be noted that the CPI measures only relative changes in price levels; it cannot be used to compare absolute prices among different regions. A comparison of the Metropolitan Phoenix Consumer Price Index with the national CPI (or indexes for any other urban area) does not indicate whether consumer prices in the Phoenix area are higher or lower than the average prices throughout the United States (or prices in the comparison city). If the CPI for city "A" were 200 and for city "B" were 250, these figures indicate only that prices have increased more rapidly in city "B" since the base period. Since price levels could have been quite different in the two cities during the base period, it is impossible to tell from the CPI whether current prices are higher in city "A" or in city "B".

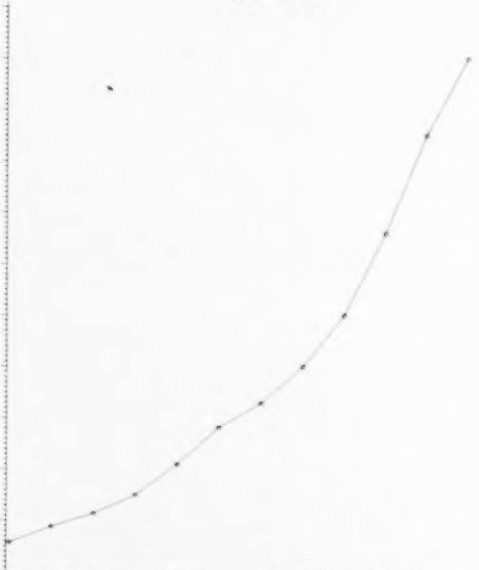
PHOENIX CONSUMER PRICES IN 1981

The pattern of price increases portrayed by the *All Items* category of the Consumer Price Index for the entire thirteen years is presented in Figures I and II. The rate of inflation in Phoenix area consumer prices showed dramatic acceleration during the 1976-1980 period—5.3 percent in 1976; 7.6 percent in 1977; 10.2 percent in 1978; 14.5 percent in 1979; and 15.2 percent in 1980—as a result of the economic expansion after the 1974-1975 recession and skyrocketing homeownership and energy prices: A detailed breakdown of the pattern of increases for each expenditure category in the 1981 Phoenix area CPI is set forth in Table 1. The relative proportion that each expenditure category constitutes in the total market basket of consumer goods and services has also been included in the table to indicate the relative contribution of individual increases in the overall inflation rate.[2]

Six of the seven major categories posted in Table 1 rose much slower in 1981 than in 1980: *Food and Beverages* (9.4 percent), *Housing* (11.7 percent), *Transportation* (10.4 percent), *Medical Care* (8.5 percent), *Entertainment* (11.1 percent), and *Other Goods and Services* (6.3 percent). *Apparel and Upkeep* prices increased 6.0 percent, compared to the 1980 figure of 1.7 percent. Yet it should be noted that the increase in the 1980 rise was unusually low. Increases in previous

FIGURE I

METROPOLITAN PHOENIX
CONSUMER PRICE INDEX
Annual Average Indexes,
1969-1981



Source: Bureau of Business and Economic Research, Arizona State University, in cosponsorship with Valley National Bank.

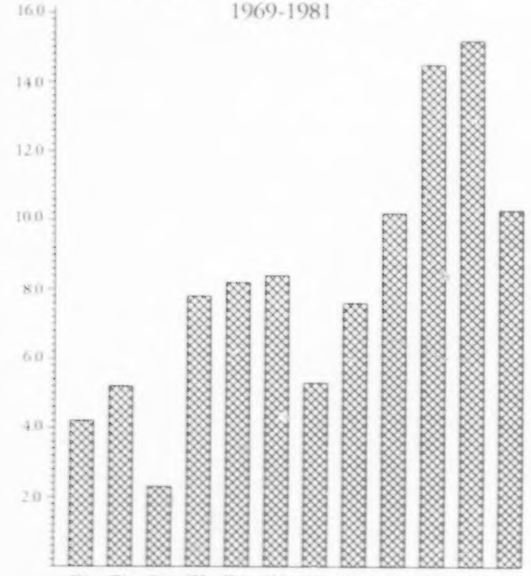
years in this category were greater than the 6.0 percent rise of 1981.

Prices for *Food and Beverages* increased 9.4 percent, a much smaller increase than that recorded for 1980 (10.8 percent). Food at Home costs rose at the same rate as 1980 (9.5 percent). Large increases in Cereals and Bakery Products (11.3 percent) and Fruits and Vegetables (13.7 percent) were tempered by a continued modest rise in Meats, Poultry, Fish, and Eggs (5.2 percent). A detailed analysis of 1981 Phoenix area Food at Home prices is presented later in another article. Food Away from Home increased only slightly more than did Food at Home. The Phoenix area full-service and fast-food restaurants increased prices by 9.7 percent in 1981, less than the 1980 price increase of 14.0 percent.

Housing category price increases continue their major contribution to the Metropolitan Phoenix Consumer Price Index with a 1981 increase of 11.7 percent. This, however, is down considerably from the 1980 increase of 17.9 percent. Of the three major subcategories of *Housing*, Shelter posted the largest increase at 12.8 percent. As might be expected, the major factor was the 15.0 percent increase in Homeownership costs due to contracted mortgage interest cost increases. Fuel and Other Utilities increased 8.2 percent. The largest increase in this subcategory was in water and sewerage maintenance costs (17.6 percent). Utility (piped) gas posted a decrease of 2.9 percent. Household Furnishings and Operations posted an increase of 8.5 percent. Tenants' Insurance posted the largest increase in this subcategory at 17.9 percent. Textile household furnishings such as linens, draperies, pillows, and sewing materials had the smallest price increase at 1.3 percent.

FIGURE II

METROPOLITAN PHOENIX
CONSUMER PRICE INDEX
Annual Percentage Changes,
1969-1981



Source: Bureau of Business and Economic Research, Arizona State University, in cosponsorship with Valley National Bank.

Prices in the category of *Apparel and Upkeep* rose 6.0 percent in 1981. This figure represents a substantial increase over 1980, when the increase was only 1.7 percent, but is more in keeping with figures posted in 1979 (7.4 percent) and 1978 (7.7 percent). The subcategory of Apparel Services (laundry and apparel repair) experienced a jump of 14.0 percent in prices. The more heavily weighted subcategory of Apparel Commodities rose by 4.1 percent.

Transportation, the second most heavily weighted major category of the Consumer Price Index, gained an additional 10.4 percent in 1981, after experiencing a

TABLE 1

METROPOLITAN PHOENIX CONSUMER PRICE INDEX
SELECTED ITEMS 1980-1981
(1977=100)

Weight [a] *(Expressed as a Percentage of ALL ITEMS)*	*Group*	*1980 Yearly Average*	*1981 Yearly Average*	*Percentage Change 1980 to 1981*
100.000				
100.000	ALL ITEMS	145.3	160.3	10.3
17.437	*Food and Beverages*	135.0	147.6	9.4
16.226	Food	135.5	148.6	9.6
10.847	Food at Home	135.9	148.8	9.5
1.297	Cereals and Bakery Products	135.5	150.8	11.3
3.278	Meats, Poultry, Fish, and Eggs	140.4	147.7	5.2
1.527	Dairy Products	133.9	146.0	9.0
1.635	Fruits and Vegetables	134.8	153.3	13.7
3.109	Other Foods at Home	128.7	140.6	9.3
5.379	Food Away From Home	132.9	145.9	9.7
46.322	*Housing*	157.5	175.9	11.7
33.311	Shelter	172.2	194.3	12.8
6.479	Rent, Residential	130.2	135.3	3.9
26.763	Homeownership	187.4	215.5	15.0
25.595	Financing, Taxes, Insurance	193.4	222.8	15.2
11.773	Home Purchase	171.1	183.2	7.1
9.366	Mortgage Interest Rates	154.2	186.5	21.0
5.032	Fuel and Other Utilities	120.4	130.3	8.2
2.650	Gas and Electricity	130.6	140.3	7.4
7.980	Household Furnishings and Operations	121.4	131.7	8.5
5.341	*Apparel and Upkeep*	117.5	124.5	6.0
17.657	*Transportation*	145.4	160.5	10.4
16.677	Private Transportation	144.4	158.0	9.4
6.144	New and Used Cars	124.7	140.4	12.6
4.423	Gasoline, Motor Oil, Coolant, Similar Products	203.5	222.2	9.2
0.980	Public Transportation	161.7	207.5	28.3
5.350	*Medical Care*	138.9	150.7	8.5
4.341	*Entertainment*	130.1	144.6	11.1
3.551	*Other Goods and Services*	120.8	128.4	6.3

[a] Several levels of detail are provided in this table. The weights of major categories equal 100. The weights of the other items shown are components and subcomponents of the major categories. Not all detail items are shown; thus the weights associated with these detail items will not necessarily total the weights of the major categories; the weights are illustrated to allow comparison of the significance of the various items.

Source: Bureau of Business and Economic Research, College of Business Administration, Arizona State University in cosponsorship with Valley National Bank.

dramatic increase of 18.4 percent in 1980. Substantial increases in the prices of new and used cars (12.6 percent), vehicle parts and equipment (11.6 percent), and vehicle finance charges (6.1 percent) caused the Private Transportation subcategory to rise by 9.4 percent in 1981. Nevertheless, this figure represents an improvement over the 1980 average increase of 17.8 percent. As was the case in 1980, the climb in the Public Transportation subcategory outpaced that of the Private Transportation subgroup. In 1981, Public Transportation continued its 1980 pace, rising at a rate of 28.3 percent. Increasing airline fares were largely responsible, posting gains of 28.4 percent.

The *Medical Care* category experienced a moderate increase of 8.5 percent; this compares favorably with the 14.6 percent increase posted in 1980. Much of the 1981 increase is attributed to rising prescription and nonprescription drug prices (11.5 percent and 12.3 percent respectively).

In the category of *Entertainment*, sizable increases in admission fees and other entertainment services (15.9 percent) were largely responsible for an overall increase of 11.1 percent. This figure is slightly below the 1980 level of 12.9 percent. Prices in the category of *Other Goods and Services* rose 6.3 percent, slowing from their 1980 increase of 7.7 percent. Higher tuition and personal care costs continued to contribute to the category increase.

PHOENIX AREA INFLATION COMPARED WITH OTHER AREAS

The increase in consumer prices in the Phoenix area during 1981 was only marginally below that of the United States city average (10.3 percent versus 10.4 percent). Comparative data between the Phoenix Metropolitan CPI, the United States, Chicago, and Los Angeles metropolitan areas are presented in Table 2. Examination of the relative price changes for the Phoenix area and the United States indicates that Phoenix prices rose faster than the national average in four of the seven major categories: *Food* (9.6 percent versus 7.9 percent); *Housing* (11.7 percent versus 11.5 percent); *Apparel and Upkeep* (6.0 percent versus 4.8 percent); and *Entertainment* (11.1 percent versus 7.8 percent). In contrast, prices for three categories rose at a slower pace than the national average: *Transportation* (10.4 percent versus 12.1 percent); *Medical Care* (8.5 percent versus 10.8 percent); and *Other Goods and Services* (6.3 percent versus 9.9 percent).

Relative to Chicago and Los Angeles, the two metropolitan areas historically used for comparison, the 1981 Phoenix area inflation of 10.3 percent exceeded the inflation rate in Chicago (9.6 percent) and Los Angeles (9.7 percent). Comparisons between the Phoenix Area and the Chicago and Los Angeles areas followed the same trend as did the Phoenix-United States comparisons. Phoenix prices rose more rapidly in the categories of *Food, Housing, Apparel and Upkeep*, and *Entertainment* than in either of the other two comparison cities. *Transportation* and *Other Goods and Services* experienced the greatest increase in the Chicago area; *Medical Care* costs rose most rapidly in Los Angeles.

TABLE 2

CONSUMER PRICE INDEX AND PERCENTAGE CHANGES 1980-1981 PHOENIX, UNITED STATES, CHICAGO, AND LOS ANGELES

	Phoenix[a]		*United States*		*Chicago*[b]		*Los Angeles*[c]	
Group	*1981 Average Index (1977=100)*	*1981 Percentage Change Over 1980 Average*	*1981 Average Index (1967=100)*	*1981 Percentage Change Over 1980 Average*	*1981 Average Index (1967=100)*	*1981 Percentage Change Over 1980 Average*	*1981 Average Index (1967=100)*	*1981 Percentage Change Over 1980 Average*
ALL ITEMS	160.3	10.3	272.4	10.4	269.0	9.6	271.4	9.7
Food	148.6	9.6	274.6	7.9	273.1	5.8	268.7	8.0
Food at Home	148.8	9.5	269.9	7.3	268.6	6.0	270.3	8.0
Food Away From Home	145.9	9.7	291.0	9.0	285.8	5.4	267.1	8.1
Housing	175.9	11.7	293.5	11.5	283.0	10.7	295.8	10.4
Shelter	194.3	12.8	314.7	11.7	306.5	10.8	327.2	11.1
Fuel and Utilities	130.3	8.2	319.2	14.6	281.2	14.3	250.3	8.5
Household Furnishings and Operations	131.7	8.5	221.3	7.7	215.6	7.6	213.9	7.8
Apparel and Upkeep	124.5	6.0	186.9	4.8	159.2	0.8	174.8	3.2
Transportation	160.5	10.4	280.0	12.1	285.0	12.4	282.5	10.7
Medical Care	150.7	8.5	294.5	10.8	301.3	10.4	310.7	12.7
Entertainment	144.6	11.1	221.4	7.8	240.6	8.8	199.2	8.6
Other Goods and Services	128.4	6.3	235.7	9.9	237.7	11.1	229.4	9.9

[a] Phoenix metropolitan SMSA

[b] Chicago and Northwest Indiana SMSA

[c] Los Angeles-Long Beach area SMSA

Source: Metropolitan Phoenix data compiled by Bureau of Business and Economic Research, College of Business Administration, Arizona State University in cosponsorship with Valley National Bank; other data computed from indexes compiled by the U.S. Department of Labor, Bureau of Labor Statistics.

The fact that the Metropolitan Phoenix Consumer Price Index has increased at a rate greater than that of Chicago or Los Angeles does not mean that actual prices themselves are higher in Phoenix than elsewhere in the nation. The CPI measures only *changes* in prices over time; it cannot be used to compare the actual living costs from one area to another. A higher Consumer Price Index for Phoenix means only that prices in Phoenix have increased faster since the base period than they have in comparison cities.

1982 FORECASTS

Each year in early December Professors John A. Cochran and Richard D. Winkelman present detailed economic forecasts for the upcoming year at the Economic Forecast Luncheon sponsored by the College of Business Administration at Arizona State University. In his forecast for the U.S. economy in 1982, Professor Cochran predicted that the national rate of inflation would drop to 8 percent in 1982.[3] Referring to the outlook for the Arizona economy, Professor Winkelman forecast that the Metropolitan Phoenix Consumer Price Index would rise by 9.5 percent during 1982.[4] The predicted relationship between the national and the Phoenix area inflation rate is consistent with the pattern experienced in recent years—the Metropolitan Phoenix CPI has risen somewhat faster than the United States CPI since 1977, due primarily to larger increases in home prices in the Phoenix area than in the nation as a whole.

These forecasts are similar to those produced by other economists and economic forecasting models at the end of 1981. For example, the Economic Unit of *U.S. News and World Report* forecasts a 7.5 percent increase in the United States CPI during 1982; in the January, 1982 issue of *Nation's Business*, the staff of the U.S. Chamber Forecast Center (the economic forecasting unit of the U.S. Chamber of Commerce) also predicted a 7.5 percent inflation rate for the nation in 1982; and the American Statistical Association-National Bureau of Economic Research panel of forecasters surveyed in the fourth quarter of 1981 projected a national inflation rate of 8.0 percent for the year.[5]

With further evidence of the deepening of the current recession in the fourth quarter of 1981 and the first months of the new year, together with the availability of additional statistical information demonstrating a clear slowing of inflation in the U.S. economy, more recent forecasts have been more optimistic concerning probable price trends for 1982. In the February, 1982, issue of the *Morgan Guaranty Survey*, the economic research staff of the Morgan Guaranty Bank forecasts a 6.8 percent increase in consumer prices for the year. The latest available forecast (CONTROL 012582) from the widely-used Data Resources, Inc. (DRI) econometric forecasting model predicts a 6.6 percent increase in the national CPI during 1982. Robert Eggert, in his survey of March, 1982, found the concensus of inflation forecasts of over forty business economists and econometric forecasting services slightly higher—a projected average annual increase of 7.1 percent for 1982.[6]

Many experts feel that the outlook on inflation is better than it has been for the last five years. Several economic factors lead to such positive opinions:

- Bountiful harvests in the United States have filled agricultural storage facilities to overflowing, reducing the possibility of accelerating food price inflation in 1982. Retail food prices are expected to rise about 6 percent in 1982.
- The world surplus of crude oil has actually caused oil prices to drop in the new year, and crude oil prices are predicted to remain unchanged during 1982. With additional taxes, the retail price of gas may still rise moderately during the year, however, and utility costs will also increase, so that, for example, DRI forecasts an average 5.2 percent increase in consumer energy prices during 1982.
- The dollar's resurgence during 1981 lowered import costs, and the value of the dollar is expected to remain above its level of past years. Such future strength will help reduce the costs of imported goods for the U.S. economy, and is forecast to hold inflation in import prices to 1.3 percent in 1982.[7]
- The combination of recessionary economic conditions (with accompanying increases in unemployment), together with slowing inflation in 1981 led to a substantial decrease in pressure for wage increases as the U.S. economy enters 1982. Collective bargaining agreements reached in the opening weeks of the new year certainly seem to indicate a moderating of such pressures. The new Teamsters contract, for example, reportedly includes increases in wages and benefits that will average about 6 percent annually over the three-year contract. Furthermore, the pact diverts a portion of the cost-of-living adjustment to maintain current health benefits, and the union agreed to work-role changes that should augment productivity. The Ford Motor Company has also renegotiated its contract with the autoworkers' union that will lower its labor costs.

Many important labor contracts will be negotiated during 1982, including autoworkers, electrical workers, and rubber workers. Cyclical recovery in productivity as the U.S. economy emerges from recession, combined with less aggressive compensation demands by workers, should substantially reduce the inflation in labor costs.

- Information on consumer sentiment, compiled by the University of Michigan Survey Research Center, indicates that the public's inflation expectations are decreasing. In December, 1981, respondents expected an inflation rate of 5.6 percent over the next twelve months, compared with a 10.1 percent rate expected by respondents to the December, 1980, survey.[8] Such reduced inflationary expectations should contribute to lower wage demands and to smaller inflationary premiums in interest rates in coming months.

Index values for the first month of 1982 reinforce such optimistic forecasts. National CPI figures released by the U.S. Bureau of Labor Statistics indicate that consumer prices rose just 0.3 percent during January, equaling an annualized rate of 3.7 percent, the smallest increase since July, 1980.[9]

Unfortunately, looking beyond 1982 to somewhat longer-term prospects regarding inflation, probable trends are less clear. If the inflationary experience of January were to continue through the first three months of 1982, such a low rate of price increase would approximate the low point in the inflationary cycle reached during the 1975-1976 recession—a 3.2 percent annualized rate during the second quarter of 1976. As people may remember, however, with recovery from that recession came rapidly accelerating inflation with a peak of 20 percent in the first quarter of 1980.

Fortunately, most economic forecasters do not foresee a repeat of sharply higher inflation as the economy recovers from the current recession. Some experts predict that the pace of inflation will quicken somewhat to the 7.0 to 8.0 percent range in the latter part of 1982, and in 1983 and 1984 as economic conditions improve. The consensus of longer-run inflation forecasts from business economists and econometric forecasting models as compiled by Eggert Economic Enterprises shows expectations of further slackening in inflationary pressures. The "Blue Chip" panel estimates annual inflation rates of 6.7 percent for 1983, 6.6 percent for 1984, and a continuing slow decline in years beyond.[10]

A continuation of lower inflationary expectations is the real key to further long-term progress against inflation in the United States. Only if workers, consumers, and businessmen all believe that increases in the prices of things they buy will remain small, will they in turn be willing to accept stability in their own wages and prices. Bringing down the rate of inflation is one of the major goals of the current restrictive monetary policies of the Federal Reserve and the so-called "supply side" economic policies of the Reagan administration, both of which have been blamed by various sources for the current recession. Although the majority of economic forecasters do not necessarily expect these policies to return the U.S. economy to a period of relatively stable prices as experienced prior to the 1970s, some success is certainly hoped for.

CHANGES IN THE CONSUMER PRICE INDEX

Commencing with the Metropolitan Phoenix Consumer Price Index figures compiled for the fourth quarter of 1981, the base year employed to compute the Metropolitan Phoenix CPI has been changed from 1969 to 1977. The new base with which prices are compared is now the 1977 annual average price levels; and therefore, the annual average index value for each price series for 1977 is 100. This change was made to conform with a similar change to a 1977 base planned by the U.S. Bureau of Labor Statistics, which was to be implemented in January, 1982. However, the federal government has indefinitely postponed adoption of a 1977 base in their CPI series due to budgeting constraints.[11] For the convenience of its users, a complete history of the Metropolitan Phoenix CPI in terms of the new 1977 base was published in conjunction with the fourth quarter, 1981, Consumer Price Index report in the February/March, 1982 issue of *Arizona Business*.

On October 27, 1981 the U.S. Bureau of Labor Statistics announced that the method in which homeownership costs are measured in the U.S. Consumer Price Index will be changed. Effective with the data for January, 1983, the Consumer Price Index for All Urban Consumers (CPI-U) will incorporate a rental equivalence measure for homeownership costs.

The current approach for measuring homeownership costs in the CPI has been subject to widespread criticism. The BLS has been investigating alternative ways of measuring homeownership costs and has been producing alternate price indexes based upon these different methods for several years. The current direct method of treating homeownership costs includes home purchase prices, mortgage interest costs, property taxes, and the cost of insurance, home maintenance, and repairs. In the rental equivalence approach, information on rents for housing units similar to those owned will be used to represent the cost of shelter that a homeowner would have to pay each month to live in a house similar to the home he actually owns. In addition, the change in methodology will also reduce relative importance of changes in homeownership costs in affecting overall CPI. Homeownership costs make up about 25 percent of the current United States CPI; with a rental equivalence approach, homeownership will account for about 15 percent. Further information can be found in the November, 1981 issue of *CPI Detailed Report* and U.S. Department of Labor, *News Release*, 81-506.

Since the Phoenix Metropolitan Consumer Price Index is contructed to be directly comparable with the CPI-U figures produced by the U.S. Bureau of Labor Statistics, appropriate changes will be made in the Metropolitan Phoenix CPI methodology, effective in the first quarter of 1983, so that direct comparability will be maintained.[12]

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[1] Readers interested in the development of the Metropolitan Phoenix Consumer Price Index should refer to Stephen C. Hora, "Consumer Prices in the Phoenix Metropolitan Area," *Arizona Business*, August-September, 1975, pp. 3-13, and Timothy D. Hogan, "The 1979 Consumer Price Index: Its Background and Significance," *Arizona Business*, March, 1980, pp. 3-9.

[2] The relative importance weight associated with each expenditure category is based upon the expenditure patterns of urban households in the western region of the United States compiled from informatoin collected by the BLS in a 1972-1973 household expenditure survey. Since not all expenditure subcategories are shown, the sum of the weights presented will not add to 100.0 percent.

[3] John A. Cochran, "1982: Another Year of Transition," *Arizona Business*, January, 1982, p. 9.

[4] Richard D. Winkelman, "The Arizona Economy in 1982: Year of Decline, Year of Recovery," *Arizona Business*, January, 1982, p. 11.

[5] "Now for the Good News—Price Hikes Will Slow," *U.S. News and World Report*, December 28, 1981, pp. 59-61; "Economic Outlook '82-'83," *Nation's Business*, January, 1982, pp. 16-18; *Economic Outlook USA*, Autumn, 1981, p. 92.

[6] "Economy Watch," *The Morgan Guaranty Survey*, February, 1982, pp. 4-5; Sara Johnson, "Prices, Wages, and Productivity," *The Data Resources Review of the U.S. Economy*, February, 1982, pp. 1.87-1.95; Robert J. Eggert, *Blue Chip Economic Indicators*, Eggert Economic Enterprises, Inc., March 10, 1982, p. 2.

[7] Sara Johnson, p. 1.94.

[8] Sara Johnson, p. 1.87.

[9] *Wall Street Journal*, February 26, 1982, p. 3.

[10] Robert J. Eggert, pp. 2, 7.

[11] U.S. Department of Labor, Bureau of Labor Statistics, *CPI Detailed Report*, November, 1981, p. 3.

[12] The assistance of the Bureau of Business and Economic Research's Research Specialist, Tom R. Rex, and of research assistants John Clifford Armstrong, Karyl Bryniarski, Maria Hesse, Michael Leslein, and James Robertson in the compilation of the Consumer Price Index reports in 1981 and in the preparation of this article is gratefully acknowledged.

Phoenix Food Prices in 1981

TIMOTHY D. HOGAN
SIGRID E. JONES

Retail prices for food in the Phoenix area increased 9.5 percent in 1981, the same rate recorded in 1980 and down from a rise of 10.6 percent in 1979 and a 12.2 percent increase in 1978. The 9.5 percent increase in food prices was less than the 10.3 percent annual increase for consumer prices in general as recorded by the Metropolitan Phoenix Consumer Price Index (CPI) in 1980. Higher retail food prices contributed less than 10 percent of the total increase in consumer prices during the past year. As in 1980, the 1981 rate of increase in food prices for the Phoenix area was higher than the 7.3 percent rise for the nation as a whole. The food price index and the consumer price index are compiled by the Bureau of Business and Economic Research, College of Business Administration, Arizona State University. Cosponsor of the studies is Valley National Bank.

For the second consecutive year, food prices in the Phoenix area showed a moderate 9.5 percent increase. Repeating the experience of 1980, Meats, Poultry, Fish, and Eggs showed the smallest increase. Fruits and Vegetables experienced the most dramatic increase. The food price survey is compiled by the Bureau of Business and Economic Research, College of Business Administration, Arizona State University. Cosponsor of the study is Valley National Bank.

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The following section details the pattern of food price changes in the Phoenix area during 1981. The third section discusses the factors that led to those changes, and the fourth section compares the 1981 Phoenix experience with Chicago, Los Angeles, and the United States as a whole. The final section discusses the outlook for retail food prices during 1982.[1]

A REVIEW OF 1981

In 1981, the annual average Metropolitan Phoenix food price index rose 23 points, from 241.7 in 1980 to 264.6 in 1981, an increase of 9.5 percent. This index means that a market basket of groceries that cost $10.00 in 1967 would now cost the consumer $26.46. However, because consumers may substitute other goods as prices rise, the average consumer may not have seen a 9.5 percent increase.

Price increases were noted in all five basic food categories—*Fruits and Vegetables; Cereals and Bakery Products; Dairy Products; Other Foods;* and *Meats, Poultry, Fish, and Eggs*. The monthly changes in all categories are depicted in Table 1 and shown graphically in Figure 1. The average price change for food subgroups is shown in Table 2. Since the index numbers shown in Table 2 use a base period of December, 1978, they can not be compared to any table using a base year of 1967 or 1977.

FIGURE I
INDEX OF FOOD AT HOME COSTS
Monthly changes in Maricopa County, 1981
(Average 1967=100)

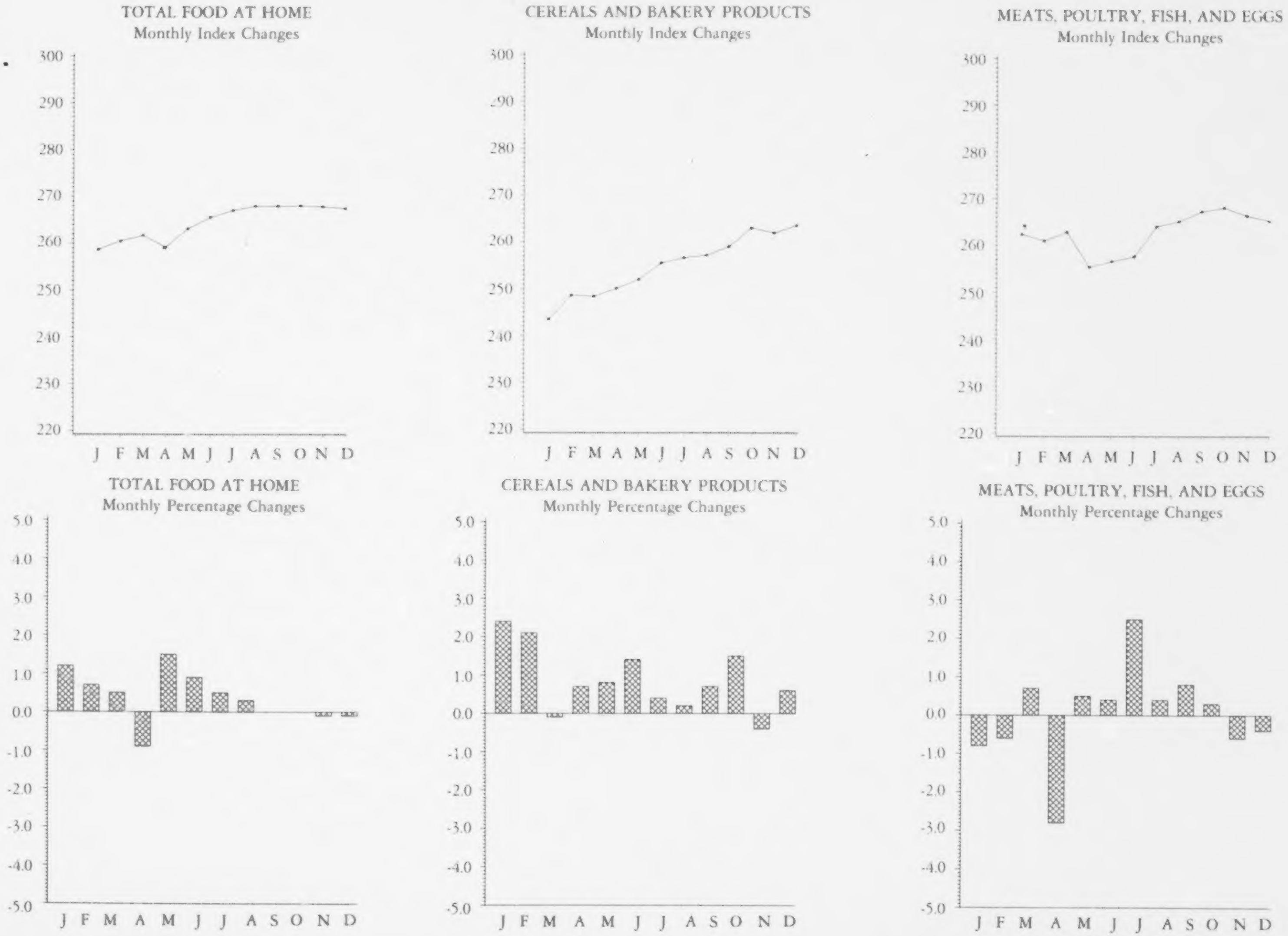
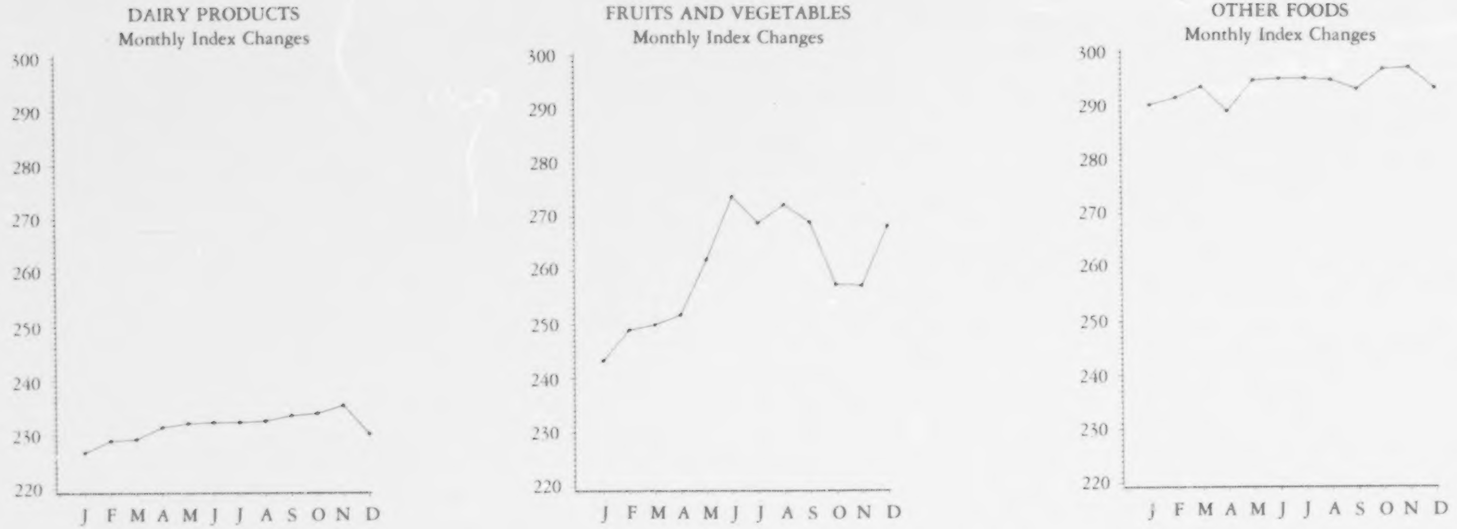


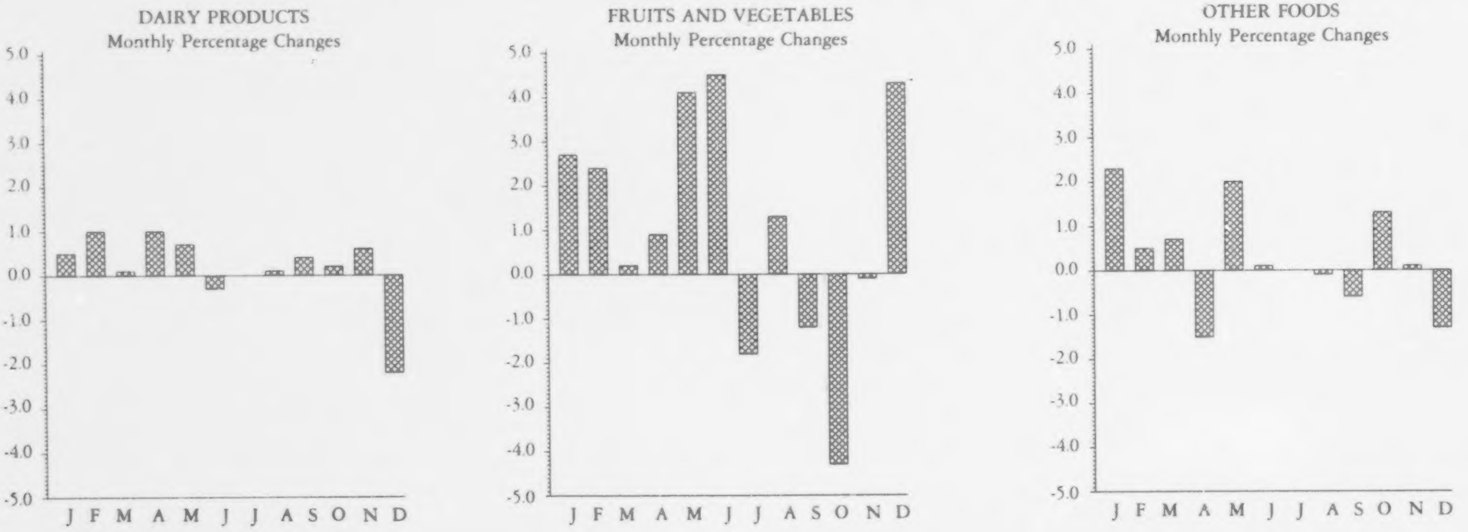
FIGURE I (Continued)
INDEX OF FOOD AT HOME COSTS
Monthly changes in Maricopa County, 1981
(Average 1967=100)



DAIRY PRODUCTS
Monthly Index Changes

FRUITS AND VEGETABLES
Monthly Index Changes

OTHER FOODS
Monthly Index Changes



DAIRY PRODUCTS
Monthly Percentage Changes

FRUITS AND VEGETABLES
Monthly Percentage Changes

OTHER FOODS
Monthly Percentage Changes

TABLE 1
1981 MONTHLY INDEX OF PERCENTAGE CHANGES IN MARICOPA COUNTY FOOD PRICES
(1967 Average = 100)

	Total Food Consumed at Home		*Cereals and Bakery Products*		*Meats, Poultry, Fish, and Eggs*		*Dairy Products*		*Fruits and Vegetables*		*Other Foods*	
	Index	*Percentage Change from Previous Month*	*Index*	*Percentage Change from Previous Month*	*Index*	*Percentage Change from Previous Month*	*Index*	*Percentage Change from Previous Month*	*Index*	*Percentage Change from Previous Month*	*Index*	*Percentage Change from Previous Month*
January, 1981	258.7	1.2	243.5	2.4	262.4	-0.8	226.7	0.5	243.3	2.7	290.2	2.3
February, 1981	260.5	0.7	248.6	2.1	261.0	-0.6	228.9	1.0	249.0	2.4	291.5	0.5
March, 1981	261.7	0.5	248.4	-0.1	262.9	0.7	229.2	0.1	250.0	0.2	293.5	0.7
April, 1981	259.2	-0.9	250.1	0.7	255.4	-2.8	231.4	1.0	251.8	0.9	289.0	-1.5
May, 1981	263.2	1.5	252.0	0.8	256.6	0.5	232.1	0.7	262.1	4.1	294.7	2.0
June, 1981	265.6	0.9	255.5	1.4	257.6	0.4	232.3	-0.3	273.8	4.5	295.0	0.1
July, 1981	267.1	0.5	256.6	0.4	264.1	2.5	232.3	0.0	268.9	-1.8	295.0	0.0
August, 1981	268.0	0.3	257.2	0.2	265.2	0.4	232.5	0.1	272.3	1.3	294.7	-0.1
September, 1981	268.0	0.0	259.0	0.7	267.3	0.8	233.5	0.4	269.0	-1.2	293.0	-0.6
October, 1981	268.1	0.0	263.0	1.5	268.1	0.3	233.9	0.2	257.4	-4.3	296.7	1.3
November, 1981	267.9	-0.1	261.9	-0.4	266.4	-0.6	235.4	0.6	257.2	-0.1	297.0	0.1
December, 1981	267.5	-0.1	263.5	0.6	265.3	0.4	230.1	2.2	268.3	4.3	293.2	-1.3

Source: Bureau of Business and Economic Research, College of Business Administration, Arizona State University in cosponsorship with Valley National Bank

Fruits and Vegetables showed a dramatic increase of 17.3 percent over 1980 price levels. This increase is largely attributed to price increases for fresh vegetables (37.1 percent) and processed vegetables (16.6 percent). These were partially offset by smaller increases in fresh fruits (3.7 percent) and processed fruits (8.4 percent).

Cereals and Bakery Product prices increased 11.2 percent. All subcategories contributed to this increase.

Prices of *Dairy Products* and *Other Foods* rose slightly less than did prices of groceries in general—showing increases of 9.2 percent and 9.1 percent, respectively, over 1980. Increases in sugar and other sweets as well as dairy products other than fresh milk and cream contributed largely to these increases.

Meats, Poultry, Fish, and Eggs, which increased modestly in 1980 by 3.5 percent, showed the smallest rise again during 1981—increasing 5.2 percent. The price of beef showed virtually no change (0.9 percent); however, this was offset by pork, which increased 10.5 percent.

Phoenix food prices traditionally increase more in the first half of the year and slow down for the second half. This was true again in 1981. The monthly index figures in Table 1 show that the Total Food Consumed at Home index rose 3.9 percent during the first six months of 1981 and only 0.7 percent during the second half.

FACTORS LEADING TO THE 1981 EXPERIENCE

At the end of 1980, food prices were widely expected to rise at double-digit rates in 1981. U.S. Department of Agriculture economists predicted that food prices would increase 10 to 15 percent during 1981; and, as in the second half of 1980, sharp rises in the prices paid to farmers would be one of the major factors leading to the higher retail food prices.[2] It is not difficult to recall why these experts made such pessimistic forecasts. Drought conditions during 1980 had reduced the production of key feed crops, and the prices of these crops rose sharply. Such conditions seemed likely to reduce supplies of meat, poultry, and eggs in 1981 and to drive the consumer prices for meats and related products sharply higher.

The big jumps in retail food prices did not occur, however. Prices for meats rose only 5 percent during 1981, and the rate of price increases in most other foods slowed substantially as the year progressed. Contrary to expectations, crop prices at the farm level weakened, and by late 1981 were more than 15 percent below the levels of a year earlier.[3] One of the major reasons for the unexpected decline in farm prices was the fact that the 1981 supply situation for many commodities did not turn out as badly as anticipated. Effects of a poor farm economy and high interest costs resulted in a larger supply of livestock in the market in 1981 than was expected. Timely rains in many areas of the country eased the effects of drought conditions on food production, and bountiful crops were harvested last year, with a number of 1981 crops actually exceeding their previous highs. At the same time, the demand for many food commodities slackened in both domestic and international markets in response to slowing economic conditions.

TABLE 2

FOOD PRICE CHANGES: 1980-1981
MARICOPA COUNTY
December, 1978 = 100[a]

	Average Index		*Percentage*
	1980	*1981*	*Change*
Cereals and Bakery Products			
Cereal and Cereal Products	116.9	133.4	14.1
Bakery Products	117.9	129.6	10.0
Meats, Poultry, Fish, and Eggs			
Beef	120.2	121.4	0.9
Pork	98.3	108.7	10.5
Other Meats	109.0	114.8	5.3
Poultry	108.4	110.8	2.2
Fish and Seafood	114.7	120.8	5.3
Eggs	107.8	114.8	6.6
Dairy Products			
Fresh Milk and Cream	117.0	123.9	5.9
Other Dairy Products	120.6	137.0	13.6
Fruits and Vegetables			
Fresh Fruits	106.0	109.8	3.7
Fresh Vegetables	133.8	183.4	37.1
Processed Fruits	107.9	117.0	8.4
Processed Vegetables	110.0	128.3	16.6
Other Foods			
Sugar and Other Sweets	124.7	144.0	15.5
Fats and Oils	110.0	121.1	10.2
Nonalcoholic Beverages	122.3	128.5	5.0
Misc. Prepared Foods	117.7	133.0	12.9

[a] Detailed indexes for subgroups were not computed prior to December, 1978; therefore these index values are not comparable with index figures for main food groups as shown in Tables 1 and 3, which have a 1967 base.

Source: Bureau of Business and Economic Research, College of Business Administration, Arizona State University in cosponsorship with Valley National Bank.

While the prices paid to farmers did not rise as expected, food marketing costs, which comprise about two-thirds of the retail price of domestically produced foods, rose over 10 percent. These rising costs resulted from continuing increases in each of its major components. Labor costs, by far the largest component of the marketing bill, rose about 11 percent in 1981. Prices for packaging materials, which make up about one-tenth of total costs, increased 8 percent last year—down substantially from the 14 percent jump of 1980. Energy costs also rose substantially—up an average of almost 20 percent above the previous year during the first nine months of 1981. Another double-digit increase (13 percent) was recorded in transportation costs last year. Other costs, including depreciation, interest, repairs, and rent, rose at a 10 percent rate during 1981. Finally, the profit component of marketing costs declined slightly, as many food manufacturers were affected by the adverse economic conditions.[4]

COMPARISON OF MARICOPA COUNTY WITH OTHER AREAS

It is useful to compare the percentage change in food prices in Maricopa County, the United States and various metropolitan areas. Table 3 presents index averages for Maricopa County, the United States, Los Angeles and Chicago. The indexes were set at 100.0 in 1967. Since food costs were not the same across the nation in the base year 1967, the absolute index levels are not directly comparable. However, percentage changes in the various categories are relevant indicators of food price increases.

The Total Food Consumed at Home index for Maricopa County rose 9.5 percent and did not fare well against the United States (7.3 percent), Los Angeles (8.0 percent), or Chicago (6.0 percent). The increase in Maricopa County is largely attributable to a 17.3 percent increase in the prices of fruits and vegetables, 5 percentage points greater than the United States and the two reference cities.

In all five subcategories, Maricopa County rose more than the United States, Los Angeles or Chicago, with the exception of the index for the *Other Foods* subcategory, which rose 9.1 percent in the Phoenix area in 1981 compared with a 10.1 percent increase for the Los Angeles area.

The price increases recorded in all five food subcategories for the Chicago area were below those of the overall United States during 1981. Los Angeles area food prices, on the other hand, generally rose more than the national average last year, with the exception of a slightly smaller increase in the *Meats, Poultry, Fish, and Eggs* subcategory (3.7 percent in Los Angeles versus 4.4 percent for the nation).

THE OUTLOOK FOR 1982

The relatively small increases in retail food prices experienced during the later part of 1981 can be expected to continue at least through the first half of 1982. The U.S. record harvest in 1981 has filled storage capacities to overflowing, and most experts agree that this huge holdover supply virtually eliminates any possibility of sharply higher food prices in 1982. Primarily due to higher marketing costs, the U.S. Department of Agriculture economists predict that grocery store food prices

TABLE 3

1981 PERCENTAGE CHANGES IN FOOD PRICE INDEXES FOR MARICOPA COUNTY, THE UNITED STATES, AND SELECTED METROPOLITAN AREAS

(1967 Average = 100)

Location	*Total Food Consumed At Home*	*Cereals and Bakery Products*	*Meats Poultry, Fish and Eggs*	*Dairy Products*	*Fruits and Vegetables*	*Other Foods*
Maricopa County						
Average 1981 Index	264.6	255.0	262.7	231.6	260.2	293.6
Average 1980 Index	241.7	229.3	249.8	212.1	221.8	269.1
1981 Percentage Change	+9.5	+11.2	+5.2	+9.2	+17.3	+9.1
United States						
Average 1981 Index	269.9	271.1	252.8	243.6	276.3	324.2
Average 1980 Index	251.5	246.4	242.2	227.4	246.7	301.9
1981 Percentage Change	+7.3	+10.0	+4.4	+7.1	+12.0	+7.4
Los Angeles						
Average 1981 Index	270.3	281.6	252.0	237.3	266.4	328.4
Average 1980 Index	250.1	253.9	243.1	220.6	236.8	298.5
1981 Percentage Change	+8.0	+10.7	+3.7	+7.7	+12.3	+10.1
Chicago						
Average 1981 Index	268.6	273.7	255.7	235.0	274.5	326.2
Average 1980 Index	253.5	253.4	248.7	221.8	250.6	304.6
1981 Percentage Change	+6.0	+8.0	+2.8	+6.0	+2.5	+7.1

Sources: Compiled from data published in *Arizona Business*, Bureau of Business and Economic Research, College of Business Administration, Arizona State University in cosponsorship with Valley National Bank; and U.S. Department of Labor, Bureau of Labor Statistics, *The Consumer Price Index*.

will climb 5 to 8 percent this year, with a 6 percent rise most likely.[5] This is consistent with the Data Resources, Inc. national econometric forecasting model, which also forecasts a 6 percent increase in the food and beverage component of the U.S. CPI during 1982.[6]

Lower feed costs resulting from the record corn crop should provide some stimulus for increased beef and poultry production in 1982, but pork production is likely to decline as producers adjust losses suffered in the last three years. The larger supplies of beef and poultry will limit price increases in these foods, but larger price increases in pork products can be expected. Egg production is also predicted to drop in response to declines in consumer demand, so that egg prices are expected to post relatively small increases. While the levels of dairy prices in 1982 will depend upon the final form of the federal dairy price-support program, it is expected that current ample supplies will also hold price increases for dairy products below the average for all foods.[7] The Economic Unit of *U.S. News and World Report* forecasts that during 1982, beef prices will rise 4 to 6 percent, pork prices 7 to 11 percent, poultry prices only 3 to 5 percent, the price of eggs 5 percent, and the prices of dairy products 4 to 5 percent.[8]

This fall the apple harvest was relatively small due to cold weather in major apple-growing areas last spring. Pear and grape production is also down, and the citrus crop is also smaller this year. In all, such smaller supplies of many fresh fruits could push grower prices up more than 10 percent in 1982. On the other hand, the average farm prices for fresh vegetables are expected to decline due in part to the big harvests of potatoes and edible beans in 1981. Smaller acreages were alloted for processed vegetables this year, but price effects of these cutbacks will be partially offset by large existing supplies of canned products. The overall increase in the retail prices of processed fruits and vegetables is forecast to be 9 to 10 percent in 1982.

Prices of most other foodstuffs are not predicted to rise substantially this year. Record 1981 grain crops will keep prices low. Large carryovers of vegetable oil, soybeans, and peanuts, together with higher world production of sugar will hold down prices for these commodities. The prices of tea and cocoa are also expected to remain relatively stable, but coffee prices are forecast to increase in 1982.

Due to the relatively large supplies of food that should be available during 1982, the farm value of domestic foods is predicted to rise by only 1 to 4 percent. Thus, higher food marketing costs will be the main contributor to the expected 6 percent rate of food price inflation for the year.[9]

NOTES

[1] An explanation of food price index calculation that can be found in Jerry L. Kingston, "Maricopa County Food Cost: The 1970 Record," *Arizona Business Bulletin* 18 (April, 1971): 8. For a discussion of the revisions to this methodology incorporated into the index in January, 1979, see Timothy D. Hogan, "The 1979 Consumer Price Index: Its Background and Significance," *Arizona Business*, 27 (March, 1980): 5.

[2] U.S. Department of Agriculture, *Agricultural Outlook*, December, 1980, p. 12.

[3] John Rosine and Paul Balides, "Perspectives on the Food and Agricultural Situation," *Federal Reserve Bulletin*, January, 1982, pp. 1-12.

[4] U.S. Department of Agriculture, *Agricultural Outlook*, November, 1981, pp. 14-16; and December 1981, p. 20.

[5] U.S. Department of Agriculture, *Agricultural Outlook*, December, 1981, p. 1

[6] Sara Johnson, "Prices, Wages, and Productivity," *Data Resources Review of the U.S. Economy*, February, 1982, p. 1.94.

[7] U.S. Department of Agriculture, *Agricultural Outlook*,December, 1981, p. 18.

[8] "Now for the Good News—Price Hikes Will Slow," *U.S. News and World Report*, December 28, 1981, pp. 59-61.

[9] U.S. Department of Agriculture, *Agricultural Outlook*, December, 1981, pp. 19-20.

[10] The assistance of the Bureau's Research Specialist Tom Rex and of Ellen Montanari, Karyl Bryniarski, Maria Hesse, Mike Leslein, and Jim Robertson in the compilation of the Food Price Index during 1981 and in the preparation of this article is acknowledged with appreciation.

Arizona Construction Activity: A Holding Pattern for 1981

JAY Q. BUTLER

A year ago, people were fairly confident that 1981 would produce a growing economy and an expanding real estate market. Those expectations, however, did not materialize. The year ended in a recession with little hope for much improvement until the latter part of 1982 or even early 1983.

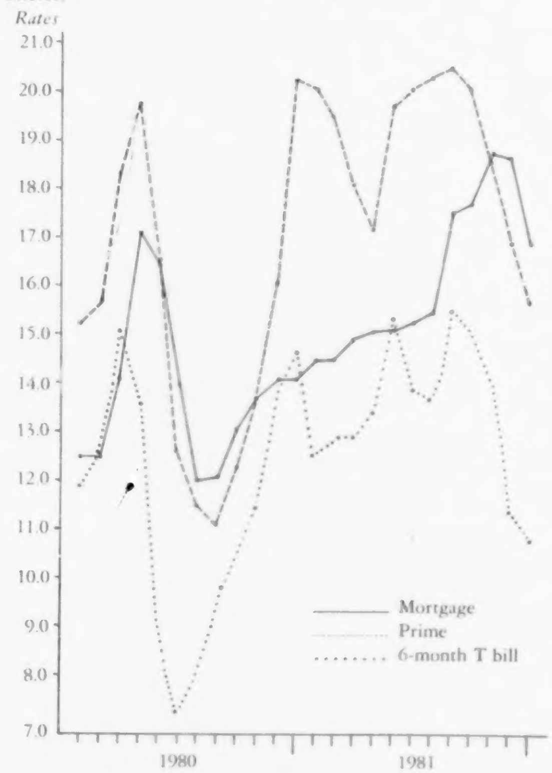
Figure 1 presents the main concern of 1981—high and volatile interest rates. Like a roller coaster ride, the prime interest rate ranged from 13 percent to over 20 percent. Conventional mortgage rates suffered a similar fate with a range from 12 percent to over 18.5 percent. Although the 1981 level of construction activity was comparable to 1980, it did not have the strength or consistency expected in a year of recovery. (See the 1981 year-end report on pages 24-26).

SECTORAL CHANGES

Total construction activity in Arizona was 82,608 permits valued at $2.42 billion, a 4 percent decline from

FIGURE 1

INTEREST RATE ACTIVITY
1980-1981



Sources: News, Federal Home Loan Bank Board, and *Federal Reserve Bulletin*, Federal Reserve.

In response to the uncertain economic conditions of 1981, the Arizona construction industry experienced a year of near stagnation. While Residential activity declined, some segments of the Commercial sector experienced increases, and the Industrial sector remained stable.

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the 86,275 permits of 1980 but a 1.4 percent increase in dollar value from the $2.39 billion of a year ago. In Maricopa County, total reported permits declined 1 percent (46,417 to 45,681 permits) with a 1 percent increase in dollar value ($1.48 billion to $1.51 billion). These levels demonstrate the basic stagnation of the Arizona construction industry in response to the uncertain economic conditions of 1981.

The geographical spread of activity has remained comparable to the proportions of previous years: Maricopa County accounted for 55 percent of the recorded permits and 62 percent of the dollar value, while Pima County reported 16 percent of the permit activity and 20 percent of the dollar value. Table 1 provides a perspective on construction activity by counties for 1980 and 1981.

Residential

The homebuilding industry continued to be adversely affected by economic conditions. In 1980, the primary concern was high interest rates. In 1981, interest rates continued high but the situation was compounded by an erosion of business and consumer

TABLE 1

ARIZONA BUILDING PERMIT ACTIVITY: 1980 and 1981

	RESIDENTIAL[1]		*COMMERCIAL*		*INDUSTRIAL*		*OTHER*		*TOTAL*	
	Number of Permits	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*
APACHE COUNTY: 1981	166	3,285,448	24	443,500	3	693,000	18	383,712	211	4,805,660
1980	142	2,235,273	14	1,179,390	1	100,000	15	173,800	172	3,688,463
Percent Change	+17	+50	+71	-62	+200	+593	+20	+121	+23	+30
COCHISE COUNTY: 1981	1,137	17,837,972	70	10,882,204	7	179,504	1,146	4,819,686	2,360	33,719,366
1980	1,335	26,385,979	60	3,379,566	5	151,790	1,230	3,437,388	2,630	33,354,723
Percent Change	-15	-32	+16	+222	+40	+18	-7	+40	-10	+1
COCONINO COUNTY: 1981	1,841	40,106,403	166	25,407,987	8	393,866	463	6,172,711	2,478	72,080,967
1980	1,774	38,859,459	142	12,841,409	9	465,992	477	24,193,308	2,402	76,360,168
Percent Change	+4	+3	+17	+98	-11	15	3	-74	+3	-5
GILA COUNTY: 1981	954	13,022,080	51	2,223,792	5	68,688	396	1,240,652	1,406	16,555,212
1980	859	10,979,181	40	3,001,489	4	406,243	257	4,581,638	1,160	18,968,551
Percent Change	+11	+19	+22	-26	+25	-83	+54	-72	+21	-13
GRAHAM COUNTY: 1981	460	5,510,346	28	480,050	1	15,000	48	864,180	537	6,869,576
1980	466	6,876,081	57	4,323,157	3	20,700	54	3,373,072	580	14,593,010
Percent Change	-1	-20	-51	-88	-66	-28	-11	-74	-7	-52
GREENLEE COUNTY: 1981	20	320,655	1	1,000	—	—	3	15,800	24	337,455
1980	22	533,750	—	—	1	10,000	3	1,500	26	545,250
Percent Change	-9	-40	—	—	—	—	—	+953	-8	-38
MARICOPA COUNTY: 1981	23,609	616,842,830	2,205	532,931,275	533	140,876,225	19,334	221,645,940	45,681	1,512,296,270
1980	24,054	559,580,724	1,714	485,658,360	518	151,624,538	20,131	293,444,440	46,417	1,488,308,062
Percent Change	-1	+10	+28	+10	+2	-7	-3	-24	-1	+1
MOHAVE COUNTY: 1981	2,949	40,909,453	221	17,950,941	2	1,667,640	2,740	8,908,471	5,912	69,436,505
1980	3,597	56,829,370	251	18,720,839	4	823,786	2,781	5,668,424	6,633	82,042,419
Percent Change	-18	-28	-12	-4	-100	+102	-1	+57	-11	-15
NAVAJO COUNTY: 1981	1,181	21,801,888	44	4,945,158	23	206,680	189	1,002,910	1,437	27,956,636
1980	1,059	17,944,840	65	3,562,325	6	39,584	88	1,772,007	1,218	23,318,756
Percent Change	+11	+21	-32	+38	+283	+422	+115	-43	+18	+20
PIMA COUNTY: 1981	7,266	159,741,677	516	278,364,628	16	4,432,625	5,636	48,436,804	13,454	490,975,734
1980	9,740	226,356,723	481	189,446,328	13	4,863,146	6,519	60,182,352	16,743	480,848,549
Percent Change	-25	-29	+7	+46	+23	-9	-14	-20	-20	+2
PINAL COUNTY: 1981	2,059	27,110,335	94	8,171,752	10	654,188	832	7,277,567	2,995	43,213,842
1980	1,227	14,231,821	60	2,629,487	8	2,567,300	512	4,154,401	1,807	23,574,209
Percent Change	+68	+90	+57	+212	+25	-74	+63	+75	+66	+83
SANTA CRUZ COUNTY: 1981	191	6,129,570	8	326,600	4	320,000	71	1,434,524	274	8,210,694
1980	165	6,565,607	3	142,916	1	725,000	37	633,076	206	8,065,879
Percent Change	+16	-7	+166	+129	+300	-56	+92	+127	+33	+2
YAVAPAI COUNTY: 1981	2,708	69,018,883	178	21,151,542	18	908,443	1,006	7,725,883	3,910	98,804,751
1980	2,671	53,747,535	151	10,816,347	16	15,105,220	975	7,680,655	3,813	87,349,737
Percent Change	+1	+28	+1	+95	+12	-93	+3	+1	+3	+13
YUMA COUNTY: 1981	1,475	26,459,561	100	10,122,728	11	1,067,002	363	4,045,512	1,949	41,694,803
1980	1,948	34,199,347	97	10,723,973	8	1,872,988	415	6,278,588	2,468	53,074,896
Percent Change	-24	-23	+3	-5	+38	-43	-13	-36	-21	-21

[1] Includes mobile homes.

[2] Much of the change is due to the inclusion of Apache Junction in the 1981 report.

Source: Bureau of Business and Economic Research, College of Business Administration, Arizona State University.

confidence, reflecting worsening economic conditions in a year that was to show improvement.

Maricopa County. In Maricopa County, single-family permit activity declined only 3 percent from 12,726 permits to 12, 276 permits. Because of relative strength in higher price homes, dollar value increased 11 percent from $509 million to $563 million (see Table 2). On the surface these numbers do not look bad, but underlying aspects of activity suggest some concern.

Table 3 shows quarter-by-quarter activity for the Maricopa County single-family market. First quarter activity was good due to expectations of an increasing market. The increase in the second quarter was due to a desire to obtain permits before certain cities increased their development fees. The decreases recorded in the last two quarters of 1981 were due to declining economic conditions and the existence of permits acquired during the second quarter. Permits represent only governmental approval to build, but they do not show a start of construction. Because of poor market conditions, many of the permits were not used.

Sales activity during the year declined 26 percent from 16,895 to 12,414 new homes. By limiting start activity, builders have been able to maintain better control of their inventories than during the 1974-1975 downturn. This control is needed for the short run survival of many homebuilders.

TABLE 3

SINGLE-FAMILY PERMIT ACTIVITY
BY QUARTERS FOR 1981
(MARICOPA COUNTY)

	Number of Permits	*Dollar Value (millions)*
First Quarter	3,698	$165
Second Quarter	4.603	214
Third Quarter	2,102	99
Fourth Quarter	1,873	86
TOTALS	12,276	$564

Source: Bureau of Business and Economic Research, College of Business Administration, Arizona State University.

Pima County. Pima County reported a 42 percent decline in single-family permit activity (4,224 to 2,471 permits) and a 34 percent decrease in dollar value ($208 million to $138 million).

Rest of Arizona. A pattern of declining single-family permit activity was repeated in the rest of the state with a 13 percent permit decline (5,471 permits to 4,765 permits) and a 3 percent decrease in dollar value ($203 million to $196 million).

During 1981, the remaining twelve counties reported activity comparable to 1980 with significant decreases recorded in Cochise County (568 to 290

TABLE 2

KEY SECTOR CONSTRUCTION ACTIVITY: 1980 AND 1981

			COMMERCIAL							
	SINGLE FAMILY		*APARTMENTS* [a]		*OFFICE BUILDINGS* [b]		*RETAIL STORES* [c]		*INDUSTRIAL*	
	Number of Permits	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*
MARICOPA COUNTY										
1981	12,276	563,983,782	325	197,135,364	337	168,064,703	450	87,172,380	533	140,876,225
1980	12,726	509,829,816	364	178.028,836	235	103,489,605	580	126,707,674	518	151,624,538
PIMA COUNTY										
1981	2,471	138,131,792	51	36,393,735	218	131,876,730	185	96,409,190	16	4,432,625
1980	4,224	208,250,385	59	48,217,622	215	102,639,795	90	25,282,981	13	4,863,146
REST OF ARIZONA										
1981	4,765	195,722,887	68	31,105,847	138	14,375,912	376	33,156,640	92	6,174,011
1980	5,471	202,619,148	38	12,158,349	138	12,209,220	369	27,094,788	66	22,288,803
ARIZONA TOTAL										
1981	19,512	897,838,461	444	264,634,946	693	314,317,345	1,011	216,738,210	641	151,482,861
1980	22,421	920,699,349	461	238,404,807	588	218,338,620	1,039	179,085,443	597	178,776,487

[a] Five or more housing units.

[b] Office, bank, medical and professional buildings.

[c] Shopping centers and other mercantile buildings.

Source: Bureau of Business and Economic Research, College of Business Administration, Arizona State University.

permits), Mohave County (1,033 to 648 permits) and Yuma County (575 to 320 permits).

As in past years, the nonmetropolitan counties accounted for 24 percent of the total single-family activity and 20 percent of the total dollar value. However, in the mobile home market, the nonmetropolitan counties represent nearly 50 percent of the recorded mobile home permits. Due to increased housing costs, mobile home activity is increasing in Maricopa and Pima counties as well.

Commercial

The commercial sector includes apartments (5 or more units), office buildings, and retail space. Table 2 summarizes the activity in each of these areas.

Maricopa County. The most active area in Maricopa County was office buildings. The number of office permits increased 43 percent (235 to 337 permits), and the recorded dollar value increased 63 percent ($103 million to $168 million). Much of this activity occurred along Camelback Road and along the central corridor in Phoenix. Absorption rates have set records over the past two years; rents also increased to record levels. Because of continued construction activity and current depressed economic conditions, there is some disagreement on how much longer the office market will continue to expand. Even with some market decline, the continued movement of regional offices and expansion of local firms in serving a growing population should support a good office market.

The retail sector strongly felt the consequences of adverse economic conditions with sluggish retail sales and high interest rates affecting small and large retailers alike. Until the economy improves and new housing areas are developed, retail construction will remain relatively low.

While the new home market was stagnant, the apartment market once again showed some positive signs of decreasing vacancy rates and increasing rents. With very limited new home construction, the apartment market could have a good year in providing alternative housing. The main problems could be overbuilding and resurgence in the single family market.

Pima County. As shown in Table 2, Pima County was very similar to Maricopa County. The office building sector showed definite improvement. The sector for growth was the retail sector with the apartment area showing a slight decline.

Rest of Arizona. Unlike the housing sector, the commercial pattern for the rest of Arizona differs somewhat from Maricopa County. One change is the growth of the retail sector in nonmetropolitan communities, shown by the fact that retail permits increased 2 percent (364 to 376 permits) while dollar value was up by 22 percent ($27 million to $33 million). This new retail development in supermarkets, shopping centers, and fast food franchises recognizes the largely untapped growth potential of the smaller communities.

Apartment development also showed a marked improvement in the nonmetropolitan communities such as Flagstaff, Lake Havasu, Prescott, and Yuma. The number of permits increased 79 percent (38 to 68 permits) and dollar value increased 158 percent ($12 million to $31 million). In Maricopa County, an apartment permit represents approximately thirty housing units while in the nonmetropolitan communities a permit results in approximately fifteen housing units.

Industrial

This sector is very important to a growing state in need of basic employment. Continued good levels of performance in this sector is needed to support the expected growth for the entire state.

Maricopa County. Industrial activity was very stable with a 2 percent increase in permit activity (518 to 533 permits) but a 7 percent decline in dollar value ($151 million to $141 million). This stability is remarkable considering the strong showing in previous years and the weak 1981 economy. Industrial activity in the electronics and computer areas should lead continued growth in the industrial sector. The Phoenix area is still viewed as an attractive location for its climate, lifestyle, labor supply and lease and construction costs.

Pima County. Since the completion of the IBM plant in 1979, the industrial sector in Pima County has been lower but stable at around $4 million.

Rest of Arizona. In other communities, the industrial base is very limited, hence, any activity can have a profound effect. As an example, the 93 percent decline (see Table 1) for industrial activity in Yavapai County is due largely to a single $10 million plant built in 1980. Most counties show levels of activity under $1 million (see Table 1). Thus, the nonmetropolitan counties continue to lack the economic base to sustain any high levels of new industrial development.

Other

This sector includes government sponsored activity and miscellaneous private development such as fences, permit renewals and swimming pools. This sector is very sensitive to government projects such as the 74 percent decline reported in Coconino County (Table 1) due to a $21 million water treatment plant built in 1981. Because of a weakening economy and limited taxing power, capital construction in the government area is not expected to demonstrate any strong upward movement. Government projects are important in providing the support services for economic growth and jobs in a weak construction market. Maricopa County demonstrated a 3 percent decline in permit activity (20,131 to 19,334 permits) and 24 percent decrease in dollar value ($293 million to $222 million). The rest of Arizona demonstrated an identical pattern of activity.

OUTLOOK FOR 1982

Given the economic conditions and uncertainty of 1981, the achieved levels of construction activity demonstrate the basic strengths and potential of the Arizona market. While great advances were not expected in 1981, it was hoped that the market and economy would definitely begin to improve. However, economic conditions and business and consumer confidence declined through the year. The real estate picture for 1982 is probably best viewed with a great deal of caution since a wide range of opinions exist concerning the length and depth of the national recession and the timetable for recovery.

During 1982, several key factors need to be examined. The first is interest rates because of their cost importance in real estate and their role as a general indicator of economic conditions. While Figure I shows basic interest rates declining toward the end of 1981, they did rise again in January only to show some decline in February and March, exemplified by the FHA/VA mortgage, which moved from 16.5 percent to 15.5 percent. Currently many economic observers believe that interest rates should continue to decline in response to the second and related factor—lower credit demand by private and governmental organizations. The level of credit demand has a definite impact on interest rates.

Much of this decline in credit demand is attributed to weak economic conditions. The fundamental unknown factor is whether the economy has finally bottomed and will begin to recover or if it is simply on a plateau before further decline. Furthermore, some of the decline in credit demand is due to reduced federal borrowings but some people foresee interest rate upswings later this year as government borrowings increase to support the projected deficit.

Basically, the present situation holds a tremendous amount of uncertainty and concern about the future direction of the economy. The volatility of interest rates reflect this uncertainty about recovery, continuing budget deficits and tight monetary control.

The rate of inflation is the third key factor. Continued decline would allow for some relaxation of the current Federal Reserve policy. However, continued tight money will drive interest rates up, but if the policy is relaxed too quickly, renewed inflation will also drive rates up. A consistent pattern of declining inflation will do much to enhance business and consumer confidence and enhance economic development.

While the long-run economic viability of the Arizona real estate and construction market is very strong, many people have serious concerns about the levels of performance for 1982. In January, 1982, Phoenix Magazine, Inc. and the Arizona Real Estate Institute surveyed representatives of four real estate groups in Maricopa County: homebuilding; financial services (banks, savings and loan associations, and mortgage bankers); real estate brokerage (commercial and residential); and other (appraisal, developers, government and property management).

A similar group surveyed in 1981 expressed a consistent and fairly optimistic view, but the 1982 group tended to be more cautious and diverse, ranging from very pessemistic to optimistic.

A majority of respondents foresee the 1982 real estate market as slow early in the year, but improving. Many respondents noted improvements but were uncertain as to the pattern. Respondents were evenly split over whether the improvement will be steady or up and down. The consensus indicates that 1983 will demonstrate an improving pattern of activity.

Table 4 presents the respondents' opinions concerning the levels expected at the end of 1982 for seven economic indicators. Again, the range of responses tended to be broader than those expressed in 1981. For each major category, the mode (most common) and mean (average) responses are presented. The last column provides a consensus concerning the various indicators. It appears that all groups expect reasonable improvement but no dramatic changes. The consensus in consistent with what other forecasting groups are suggesting.

In response to questions concerning changes in price levels, the respondents tended to agree that new home prices, resale home prices, and land prices will each increase less than 10 percent during the coming year. In contrast, respondents in last year's survey expected

TABLE 4

EXPECTED PERCENTAGE RATES FOR 1982 ECONOMIC INDICATORS

	Home-building		*Financial Service*		*Real Estate Brokerage*		*Other*		*Consensus*	
Economic Indicators	*Mode*	*Mean*	*Mode*	*Mean*	*Mode*	*Mean*	*Mode*	*Mean*	*Mode*	*Mean*
Conventional mortgage rate	13.0	14.1	14.0	14.4	14.0	13.7	14.0	13.8	14.0	14.0
FHA mortgage rate	12.0	13.2	13.5	13.2	13.0	13.2	13.0	13.1	13.0	13.2
Prime interest rate	14.0	13.7	14.0	13.2	16.0	13.5	16.0	14.0	12.0	13.8
Inflation rate (Phoenix)	8.0	8.8	8.0	8.3	8.0	8.9	8.0	9.0	8.0	8.8
Apartment vacancy rate	5.0	5.7	5.0	4.5	5.0	5.0	5.0	5.5	5.0	5.4
Commercial interest rate	14.0	14.6	14.0	14.3	14.0	14.8	14.0	14.7	14.0	14.8
Six-month Treasury Bill rate	10.0	11.0	12.0	10.8	10.0	11.2	14.0	11.5	10.0	11.2

Mode=most common response; mean=average response

Source: Survey conducted by the Arizona Real Estate Institute, College of Business Administration, Arizona State University, 1982.

prices to increase more than 10 percent. The lower current forecasts probably are related to reduced inflation expectations and weaker economic conditions. It must be noted that 15 percent of the respondents expected no change or a decline.

Because real estate and construction rely on the future, one must have some optimism to stay in business. While most people believe recovery will occur, they are very cautious concerning the timing and strength. These concerns will probably be answered one way or the other by the end of the summer.

Even though the next six to twelve months are uncertain, the long-run economic viability of Arizona is very positive. However, this does not mean there are no problems. In order to maximize economic development, certain problems such as transportation, housing supply and costs, labor supply and skills, and water supply cannot be overlooked. How these problems are overcome will to a great degree determine the strength of economic, construction, and real estate activity for the 1980s.

While the primary focus must be on economic conditions, the entire real estate and construction industry has been changing. This has been especially evident in the financial and brokerage areas. What this means is that there will be new organizations taking part in market activities. Fundamentally, the revitalized market of the future will be markedly different from the past.

Considering the performances of 1980 and 1981, one would hope that 1982 would finally be the time of recovery and growth. However, in spite of some positive notes in the early part of 1982, there appears to be too much concern and uncertainty about national and local economic conditions to sustain any upswing. Because many forecasters and political leaders are saying that recovery should begin by midyear, one could also expect real estate and construction activity to be in a holding pattern until midyear.

In order to stimulate recovery, unemployment and interest rates must move down in a consistent pattern, inflation must continue to decline, and business and consumer confidence must increase. This latter factor is important because no major future investments will be made unless the decision-maker is confident about the economic future.

While the long run appears good, the next six months or more are shrouded in considerable uncertainty. It appears that construction and market activity will be at relatively low levels until a more definitive economic pattern is established. This means that the first part of 1982 will have some very cautious activity, and it is hoped the latter quarters produce some very positive signs leading to a fuller recovery in 1983.

Any definitive statement about 1982 is very difficult to make. One must take the year a month at a time until a more positive pattern occurs. The future of real estate activities in Arizona fosters optimism, but at this time, one must be very cautious about 1982.

Arizona Building Permits: Annual Report

1981	RESIDENTIAL*		COMMERCIAL		INDUSTRIAL		OTHER		TOTAL	
	Number of Permits	Dollar Value	Number of Permits	Dollar Value	Number of Permits	Dollar Value	Number of Permits	Dollar Value	Number of Permits	Dollar Value
APACHE CO.	166	3,285,448	24	443,500	3	693,000	18	383,712	211	4,805,660
Eagar	46	1,811,000	4	141,000	3	693,000	4	2,800	57	2,647,800
St. Johns	34	—	—	—	—	—	4	—	38	—
Springerville	22	—	13	—	—	—	1	—	36	—
Unincorporated	64	1,474,448	7	302,500	—	—	9	380,912	80	2,157,860
COCHISE CO.	1,137	17,837,972	70	10,882,204	7	179,504	1,146	4,819,686	2,360	33,719,366
Benson	68	676,660	6	721,900	1	24,000	40	97,042	115	1,519,602
Bisbee	82	264,550	—	—	1	24,800	11	523,455	94	812,805
Douglas	108	1,742,520	6	1,001,168	1	94,248	195	626,866	310	3,464,802
Huachuca City	56	118,815	1	1,040,890	2	12,000	3	12,761	62	1,184,466
Sierra Vista	262	2,668,581	19	6,481,112	—	—	727	1,470,553	1,008	10,620,246
Tombstone	28	241,225	5	75,334	1	23,256	9	10,805	43	350,620
Unincorporated	479	11,521,856	24	1,481,500	1	1,200	131	2,037,946	635	15,042,502
Willcox	54	603,765	9	80,300	—	—	30	40,258	93	724,323
COCONINO CO.	1,841	40,106,403	166	25,407,987	8	393,866	463	6,172,711	2,478	72,080,967
Flagstaff	435	17,311,545	108	15,878,622	4	170,436	298	3,578,070	845	36,938,673
Fredonia	17	76,500	3	17,900	1	8,000	11	18,935	32	121,335
Page	190	2,016,106	11	3,579,148	3	215,430	28	346,864	232	6,157,548
Unincorporated	1,132	20,072,666	36	5,171,556	—	—	60	895,028	1,228	26,139,250
Williams	67	629,586	8	760,761	—	—	66	1,333,814	141	2,724,161
GILA CO.	954	13,022,080	51	2,223,792	5	68,688	396	1,240,652	1,406	16,555,212
Globe	58	501,961	3	289,900	1	8,000	61	194,255	123	994,116
Hayden	7	5,125	—	—	—	—	20	25,305	27	30,430
Miami	40	155,890	2	812,000	—	—	19	154,515	61	1,122,405
Payson	349	3,240,988	13	347,892	3	50,688	230	372,762	595	4,012,330
Unincorporated	500	9,118,116	33	774,000	1	10,000	66	493,815	600	10,395,931
GRAHAM CO.	460	5,510,346	28	480,050	1	15,000	48	864,180	537	6,869,576
Pima	13	179,800	1	23,000	—	—	5	2,250	19	205,050
Safford	121	1,282,005	21	344,050	—	—	27	578,975	169	2,205,030
Thatcher	78	841,100	—	—	—	—	11	218,255	89	1,059,355
Unincorporated	248	3,207,441	6	113,000	1	15,000	5	64,700	260	3,400,141
GREENLEE CO.	20	320,655	1	1,000	—	—	3	15,800	24	337,455
Clifton	8	—	—	—	—	—	1	—	9	—
Duncan	—	—	—	—	—	—	1	15,000	1	15,000
Unincorporated	12	320,655	1	1,000	—	—	1	800	14	322,455
MARICOPA CO.	23,609	616,842,830	2,205	532,931,275	533	140,876,225	19,334	221,645,940	45,681	1,512,296,270
Avondale	20	192,125	21	1,772,827	—	—	110	381,343	151	2,346,295
Buckeye	38	269,878	12	282,400	1	50,000	31	102,304	82	704,582
Chandler	1,241	28,677,756	60	7,917,130	18	5,154,655	1,747	10,369,642	3,066	52,119,183
El Mirage	38	120,632	3	923,700	—	—	12	200,824	53	1,245,156
Gila Bend	8	225,900	5	90,000	1	400,000	12	108,900	26	824,800
Gilbert	182	6,617,093	8	914,333	2	385,992	152	847,658	344	8,765,076
Glendale	1,078	27,311,764	157	13,340,990	11	1,643,219	2,144	11,144,364	3,390	53,440,337
Goodyear	10	282,450	3	1,559,930	5	6,521,200	119	915,881	137	9,279,461
Guadalupe	24	184,758	4	1,418,880	—	—	3	3,767	31	1,607,405
Mesa	3,104	69,475,732	222	107,053,168	21	7,875,553	3,485	33,698,169	6,832	218,102,622
Paradise Valley	271	13,504,014	4	244,000	—	—	284	2,046,571	559	15,794,585
Peoria	467	7,444,106	28	3,193,104	6	1,792,915	426	3,077,101	927	15,507,226
Phoenix	7,935	223,360,850	924	289,630,079	197	63,308,473	6,280	93,110,059	15,336	669,409,461
Scottsdale	1,280	65,046,424	192	35,401,855	5	1,192,300	1,843	13,631,242	3,320	115,271,821
Surprise	60	297,475	5	259,500	—	—	35	143,126	100	700,101
Tempe	1,163	40,167,400	365	46,885,600	259	47,365,700	657	11,505,200	2,444	145,923,900
Tolleson	74	279,768	5	1,078,000	1	10,718	24	161,835	104	1,530,321
Unincorporated	6,366	132,549,018	183	20,656,179	5	5,135,000	1,938	39,243,199	8,492	197,583,396
Wickenburg	15	495,840	4	309,600	1	40,500	2	35,000	22	880,940
Youngtown	235	339,847	—	—	—	—	30	919,755	265	1,259,602

Arizona Building Permits: Annual Report (Continued)

1981	RESIDENTIAL*		COMMERCIAL		INDUSTRIAL		OTHER		TOTAL	
	Number of Permits	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*
MOHAVE CO.	2,949	40,909,453	221	17,950,941	2	1,667,640	2,740	8,908,471	5,912	69,436,505
Kingman City	241	4,329,401	45	1,754,431	—	—	91	255,184	377	6,339,016
Kingman Area	638	6,878,959	20	1,099,740	—	—	593	2,300,354	1,251	10,279,053
Lake Havasu City	370	10,437,924	59	9,211,154	—	—	231	3,249,134	660	22,898,212
Lake Havasu Area	66	586,099	2	46,560	—	—	70	260,546	138	893,205
Mohave Valley N.	862	10,036,703	59	4,812,705	—	—	994	1,658,285	1,915	16,507,693
Mohave Valley S.	464	5,114,852	26	820,227	—	—	504	733,313	994	6,668,392
Dolan Springs	117	1,074,810	4	83,244	—	—	103	98,926	224	1,256,980
Sacramento Val.	122	1,272,608	3	66,336	—	—	118	133,249	243	1,472,193
Mohave General	69	1,178,097	3	56,544	2	1,667,640	36	219,480	110	3,121,761
NAVAJO CO.	1,181	21,801,888	44	4,945,158	23	206,680	189	1,002,910	1,437	27,956,636
Holbrook	17	279,034	2	135,000	—	—	16	110,400	35	524,434
Show Low	122	1,717,965	8	380,999	23	206,680	76	328,662	229	2,634,306
Snowflake	45	—	2	—	—	—	3	—	50	—
Taylor	48	645,400	2	90,000	—	—	6	210,500	56	945,900
Unincorporated	864	17,940,489	25	4,039,659	—	—	67	305,098	956	22,285,246
Winslow	85	1,219,000	5	299,500	—	—	21	48,250	111	1,566,750
PIMA CO.	7,266	159,741,677	516	278,364,628	16	4,432,625	5,636	48,436,804	13,434	490,975,734
Marana	14	—	2	—	—	—	7	—	23	—
Oro Valley	17	1,734,500	1	500,000	—	—	11	55,889	29	2,290,389
South Tucson	108	437,896	4	517,688	5	135,825	58	285,280	175	1,376,689
Tucson	2,969	41,598,341	258	74,554,410	5	4,019,100	2,662	30,389,915	5,894	150,561,766
Unincorporated	4,158	115,970,940	251	202,792,530	6	277,700	2,898	17,705,720	7,313	336,746,890
PINAL CO.	2,059	27,110,335	94	8,171,752	10	654,188	832	7,277,567	2,995	43,213,842
Apache Jct.	519	10,380,568	27	3,048,708	3	367,308	438	4,770,261	987	18,566,845
Casa Grande	183	5,715,521	24	1,788,868	5	123,880	59	877,946	271	8,506,215
Coolidge	156	578,014	6	1,327,000	—	—	24	132,956	186	2,037,970
Eloy	29	56,327	6	182,489	2	163,000	16	151,006	53	552,822
Florence	13	105,250	4	79,787	—	—	16	30,784	33	215,821
Kearny	28	237,152	1	15,000	—	—	10	34,736	39	286,888
Mammoth	25	205,350	1	20,000	—	—	—	—	26	225,350
Superior	30	113,500	1	10,000	—	—	24	48,556	55	172,056
Unincorporated	1,076	9,718,653	24	1,699,900	—	—	245	1,231,322	1,345	12,649,875
SANTA CRUZ CO.	191	6,129,570	8	326,600	4	320,000	71	1,434,524	274	8,210,694
Nogales	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Patagonia	18	258,425	4	75,600	1	5,000	7	19,690	30	358,715
Unincorporated	103	4,907,554	4	251,000	3	315,000	19	467,399	129	5,940,953
YAVAPAI CO.	2,708	69,018,883	178	21,151,542	18	908,443	1,006	7,725,883	3,910	98,804,751
Chino Valley	186	2,518,374	15	263,300	3	26,343	43	243,171	247	3,051,188
Clarkdale	46	484,109	1	34,200	1	17,500	17	60,496	65	596,305
Cottonwood	196	2,435,796	21	1,813,642	2	148,600	59	325,167	278	4,723,205
Jerome	13	43,200	2	4,700	—	—	15	13,900	30	61,800
Prescott	511	10,592,091	59	6,116,113	2	121,800	504	4,223,497	1,076	21,053,501
Prescott Valley	319	5,545,644	20	852,377	2	46,000	2	211,776	343	6,655,797
Unincorporated	1,437	47,399,669	60	12,067,210	8	548,200	366	2,647,876	1,871	62,662,955
YUMA CO.	1,475	26,459,561	100	10,122,728	11	1,067,002	363	4,045,512	1,949	41,694,803
Parker	14	183,260	2	45,000	3	89,000	23	492,360	42	809,620
Somerton	89	3,415,986	3	779,247	—	—	9	36,567	101	4,231,800
Unincorporated	901	16,294,771	35	1,826,484	4	837,370	133	1,407,114	1,073	20,365,739
Wellton	3	72,200	1	5,000	—	—	4	86,000	8	163,200
Yuma	468	6,493,344	59	7,466,997	4	140,632	194	2,023,471	725	16,124,444
Total, Maricopa Co. Annual, 1981	23,609	616,842,830	2,205	532,931,275	533	140,876,225	19,334	221,645,940	45,681	1,512,296,270
Total, Maricopa Co. Annual, 1980	24,054	559,580,724	1,714	483,658,360	518	151,624,538	20,131	293,444,440	46,417	1,488,308,062
Percent Change	-1	10	28	10	2	-7	-3	-24	-1	1
Total, Arizona Annual, 1981	46,016	1,048,097,101	3,706	913,403,157	641	151,482,861	32,245	313,974,352	82,608	2,426,957,471
Total, Arizona Annual, 1980	49,049	1,055,325,690	3,135	744,415,866	597	178,776,487	33,494	415,574,629	86,275	2,394,092,672
Percent Change	-6	—	18	22	7	-15	-3	-24	-4	1

*Includes mobile homes N/R: No report

Arizona New Housing Starts: Annual Report

1981

BUILDING PERMITS ISSUED

	1 Family	*Mobile Homes*	*Duplex*	*3-4 Families*	*5 or More*	*Total Units*
APACHE CO.	125	12	4	2	1	177
Eagar	41	—	4	—	—	49
St. Johns	11	12	—	—	—	23
Springerville	17	—	—	1	1	45
Unincorporated	56	—	—	1	—	60
COCHISE CO.	290	303	1	—	4	763
Benson	8	17	—	—	—	25
Bisbee	2	—	—	—	—	2
Douglas	21	7	—	—	2	52
Huachuca City	1	—	—	—	1	45
Sierra Vista	54	67	—	—	1	221
Tombstone	5	3	1	—	—	10
Unincorporated	185	204	—	—	—	389
Willcox	14	5	—	—	—	19
COCONINO CO.	638	489	24	14	19	1,465
Flagstaff	213	49	23	6	17	540
Fredonia	1	11	—	—	—	12
Page	28	95	1	—	—	125
Unincorporated	391	318	—	—	2	735
Williams	5	16	—	8	—	53
GILA CO.	381	209	5	1	1	636
Globe	13	1	—	—	—	14
Hayden	—	—	—	—	—	—
Miami	—	—	—	—	1	32
Payson	133	97	5	1	—	244
Unincorporated	235	111	—	—	—	346
GRAHAM CO.	74	158	1	3	—	246
Pima	1	8	—	—	—	9
Safford	21	2	1	3	—	37
Thatcher	8	19	—	—	—	27
Unincorporated	44	129	—	—	—	173
GREENLEE CO.	17	—	—	—	—	17
Clifton	6	—	—	—	—	6
Duncan	—	—	—	—	—	—
Unincorporated	11	—	—	—	—	11
MARICOPA CO.	12,276	3,049	222	226	325	26,293
Avondale	5	5	—	16	1	80
Buckeye	9	5	—	—	—	14
Chandler	945	—	5	33	—	1,087
El Mirage	2	4	—	—	2	41
Gila Bend	6	—	—	—	—	6
Gilbert	110	6	1	4	—	134
Glendale	798	—	1	1	26	1,138
Goodyear	7	—	—	—	1	67
Guadalupe	7	1	—	—	1	33
Mesa	1,561	1,040	143	49	47	5,661
Paradise Valley	78	—	—	—	—	78
Peoria	276	104	12	6	—	428
Phoenix	4,418	374	34	48	142	10,346
Scottsdale	928	—	—	3	1	998
Surprise	9	12	—	—	—	21
Tempe	635	—	19	56	89	2,003
Tolleson	7	—	1	—	2	34
Unincorporated	2,460	1,496	6	9	13	4,103
Wickenburg	11	2	—	1	—	17
Youngtown	4	—	—	—	—	4

BUILDING PERMITS ISSUED

	1 Family	*Mobile Homes*	*Duplex*	*3-4 Families*	*5 or More*	*Total Units*
MOHAVE CO.	648	1,022	8	4	15	1,927
Kingman City	104	8	3	1	—	122
Kingman Area	77	324	—	—	2	418
Lake Havasu City	221	15	3	1	11	408
Lake Havasu Area	2	30	—	—	—	32
Mohave Valley N.	115	347	2	2	2	520
Mohave Valley S.	65	181	—	—	—	246
Dolan Springs	13	56	—	—	—	69
Sacramento Val.	24	46	—	—	—	70
Mohave General	27	15	—	—	—	42
NAVAJO CO.	499	241	2	—	—	744
Holbrook	6	—	—	—	—	6
Show Low	37	36	—	—	—	73
Snowflake	40	—	—	—	—	40
Taylor	12	28	—	—	—	40
Unincorporated	378	170	2	—	—	552
Winslow	26	7	—	—	—	33
PIMA CO.	2,471	1,761	87	42	51	6,165
Marana	2	8	1	—	—	12
Oro Valley	13	—	—	—	—	13
South Tucson	4	1	1	—	—	7
Tucson	687	561	80	42	46	2,725
Unincorporated	1,765	1,191	5	—	5	3,408
PINAL CO.	577	972	9	21	6	1,766
Apache Jct.	181	234	5	10	—	472
Casa Grande	115	—	2	2	4	175
Coolidge	11	15	—	—	1	76
Eloy	—	—	—	—	—	—
Florence	3	1	2	—	—	8
Kearny	4	4	—	—	—	8
Mammoth	8	12	—	—	—	20
Superior	3	3	—	—	—	6
Unincorporated	252	703	—	9	1	1,001
SANTA CRUZ CO.	112	5	4	1	—	129
Nogales	N/R	N/R	N/R	N/R	N/R	N/R
Patagonia	3	5	3	1	—	18
Unincorporated	86	—	1	—	—	88
YAVAPAI CO.	1,084	604	24	19	9	2,063
Chino Valley	36	69	—	—	—	105
Clarkdale	10	5	—	—	—	15
Cottonwood	33	34	6	—	1	87
Jerome	1	—	—	—	—	1
Prescott	185	25	4	12	4	304
Prescott Valley	142	90	9	3	—	260
Unincorporated	677	381	5	4	4	1,291
YUMA CO.	320	553	6	21	13	1,048
Parker	4	2	—	—	—	6
Somerton	68	6	—	—	—	74
Unincorporated	170	466	2	2	2	660
Wellton	1	—	—	—	—	1
Yuma	77	79	4	19	11	307
Total, Maricopa Co., Annual, 1981	12,276	3,049	222	226	325	26,293
Total, Maricopa Co., Annual, 1980	12,726	2,117	180	225	364	25,097
Percent Change	-3	44	23	—	-10	4
Total, Arizona, Annual, 1981	19,512	9,378	397	354	444	43,439
Total, Arizona, Annual, 1980	22,421	7,994	322	390	461	44,176
Percent Change	-12	17	23	-9	-3	-1

N/R: No report.

The Arizona Business Scene

1912

Demographics of Arizona: 1980 Census Overview

On April 1, 1980 the decennial census of the United States was taken by the United States Bureau of the Census. This census attempted to enumerate every individual within the United States on that day. Questions asked of every individual included such topics as age, sex, race, marital status and some basic questions about living quarters. A sample of the population answered additional questions, including occupation, income and details on living quarters. The information compiled from the questions asked of all individuals is now available, although the detailed information asked of the sample group has not yet been released. This article summarizes the Arizona data that has been released.

Population figures and growth rates by county are presented in Table 1, which verifies the rapid growth that nearly all areas of the state continue to experience. As shown in Table 2, most of Arizona's large cities are located in Maricopa County, in which 55.5 percent of the state's residents live. Pima County's population is an additional 19.6 percent of Arizona's total; thus three-fourths of Arizona's residents live within the two urbanized counties.

The least populous counties are Greenlee, Santa Cruz, Graham, and Gila, which have a combined population less than Tempe or Glendale. Each of these counties has limited reserves of private land, due to small county size and/or a large proportion of national forest, Indian reservation, or other government land. Each of these counties also has a growth rate less than the state average. The fastest growing counties are Mohave and Yavapai in the northwest portion of the state.

The majority of the state's residents (82.4 percent) identify their race as White. Other races identified are Black, 2.8 percent; American Indian, 5.6 percent; Asian and Pacific Island, 0.8 percent; and "other," 8.4 percent. Nearly all of the residents who marked the "other" category are of Spanish origin, about half of whom identified their race as White and half as "other." The

TABLE 1
1980 POPULATION AND GROWTH BY COUNTY

	Population	*Percentage Growth 1970-1980*
ARIZONA	2,718,215	53.1
Maricopa	1,509,052	55.4
Pima	531,443	51.1
Pinal	90,918	32.6
Yuma	90,554	48.9
Cochise	85,686	38.4
Coconino	75,008	55.2
Yavapai	68,145	84.2
Navajo	67,629	42.2
Mohave	55,865	116.1
Apache	52,108	61.3
Gila	37,080	26.7
Graham	22,862	37.9
Santa Cruz	20,459	46.5
Greenlee	11,406	10.4

Source: Census of Population and Housing 1980, U.S. Bureau of the Census; revisions included.

TABLE 2

1980 CITY POPULATION FOR CITIES OVER 20,000

	County	*Population*
Phoenix	Maricopa	789,704
Tucson	Pima	330,537
Mesa	Maricopa	152,453
Tempe	Maricopa	106,743
Glendale	Maricopa	97,172
Scottsdale	Maricopa	88,412
Yuma	Yuma	42,433
Sun City	Maricopa	40,505
Flagstaff	Coconino	34,743
Chandler	Maricopa	29,673
Sierra Vista	Cochise	24,937
Prescott	Yavapai	20,055

Source: Census of Population and Housing 1980, U.S. Bureau of the Census.

TABLE 3

ETHNIC COMPOSITION BY COUNTY, 1980 (PERCENTAGE OF TOTAL POPULATION)

	Spanish Origin	*American Indian*
ARIZONA	16	6
Santa Cruz	74	*
Greenlee	48	2
Pinal	29	9
Yuma	29	4
Cochise	26	*
Graham	24	12
Pima	21	3
Gila	21	14
Maricopa	13	2
Coconino	10	28
Navajo	7	48
Yavapai	6	2
Mohave	4	3
Apache	4	75

*Less than 1 percent.

Source: Census of Population and Housing 1980, U.S. Bureau of the Census.

census shows 16.2 percent of Arizona's residents are of Spanish origin.

The proportion of both Spanish origin and American Indian residents varies widely across Arizona, as illustrated in Table 3. In contrast, Blacks comprise less than 4 percent of the population of any county. The proportion of Indians is heaviest in the Northeastern part of Arizona, which includes the Navajo, Hopi, and White Mountain Apache tribes. The concentration of people of Spanish origin is heaviest in the southern portions of the state.

At the town and city level the proportion of people of Spanish origin varies even more widely, as some towns are predominately Spanish: In San Luis, Nogales, Guadalupe, Hayden, El Mirage, and South Tucson more than 75 percent of the residents are of Spanish origin. The off-reservation towns with the largest proportions of Indians are Winslow with 18 percent and Guadalupe with 34 percent. Many Guadalupe residents identify their race as Indian and their origin as Spanish. The largest proportions of Blacks are in Eloy and Sierra Vista—both 10 percent.

Arizona's population is young with a median age of 29.2 years, ranging from 39.2 years in Yavapai County and 37.1 years in Mohave County to 22.6 years in Navajo County and 20.6 years in Apache County. Children under 18 years comprise 29 percent of the population, and 46 percent of the Indian populations. People over 65 are also an important segment, with 11 percent of the population. Of the adult population (18 and over), 64 percent are married (not separated) and 19 percent are single (never married).

The state's population of 2,718,215 live in a total of 957,032 housing units that are occupied year round; thus the average household size is 2.84. This ranges by county from 2.56 in Yavapai and 2.65 in Mohave to 3.70 in Navajo and 4.12 in Apache. Arizona has more than 100,000 vacant year round housing units and more than 44,000 additional units identified as seasonal or part-time residences.

Of the total number of households, 73.7 percent are defined as family households. Nonfamily households are primarily single persons living alone, who comprise 20.9 percent of all households. The married couple family type predominates with 62.2 percent of all households, although only about half of these include children under 18 years old living at home. Single parent households are 11.5 percent of the total.

Additional information on the census is available from the State Data Center, which is a collection of governmental agencies responsible for the dissemination of Census information. The lead agency in Arizona is the Department of Economic Security. Arizona State University is also a member of the State Data Center. At this time, most of the basic population and housing statistics from the 1980 Census are available for Arizona; this information is derived from the census questions asked of all respondents. The sample data (from questions asked of only a small portion of the population) are not yet available.

A Survey of Arizona Business Conditions

HAROLD FEARON

JANUARY

The Arizona economy continued to drift lower in January, although the deterioration was less severe than in December, according to results from the monthly business survey of the Purchasing Management Association of Arizona and the Purchasing Management Association of Southern Arizona. In spite of the weakening economy, however, there are signs that the rate of decline is moderating. The employment, new orders, production, and inventory indicators all continued to drop, but at a slower rate than in the previous month, and prices continued to reflect only a moderate rate of inflation.

The purchasing business survey is in its twentieth year of consecutive monthly reporting on the current status of the Arizona economy. Data are gathered through a questionnaire sent at the close of each month to purchasing managers throughout the state, asking them to indicate the direction of activity—higher, unchanged, or lower—on six key indicators of economic activity in the month just ended. Since these purchasing managers deal daily with the forces of supply and demand, they are able to provide timely and accurate information on current business trends, which enables economic turning points to be spotted.

Prices paid for major purchased items increased again in January, and at the same rate as in the previous month. This increase was well under those in each of the first eleven months of 1981, and the lowest since mid-1975. In January, 37 percent of the purchasing managers paid higher prices; fifty percent saw prices unchanged; while 13 percent paid lower prices than in December. While inflation has not been stopped, its rate has been reduced significantly over the past year, which is helping to set the stage for a recovery later this year and meaningful real economic growth over the next several years.

Delivery time on shipments from vendors contracted for the third consecutive month, and at a decrease rate twice as large as in December. Longer delivery times were reported by 14 percent of the firms, twice as many (30 percent) enjoyed faster vendor delivery service. When vendors in general can speed up deliveries, as is happening now, it demonstrates a great deal of slack in the economy.

Inventory levels of purchased materials declined again, for the eleventh month in a row, but at a slightly smaller rate than in each of the previous three months. The survey showed 43 percent of the firms cut stocks, compared to only 23 percent who increased inventory levels. While Arizona firms are still paring stocks, these reductions have not reached crisis proportions and are being accomplished in a very orderly manner. In fact, the major reductions probably are over.

New orders received from customers dropped again, for the sixth consecutive month. Yet, the rate of decline was only one-third as great as in December. Twenty-seven percent said their firm booked more new business in January than in December, compared to a larger 39 percent who saw their orders decline. Hopefully this is a signal that the worst, in terms of the rate of overall drop in the economy, is now behind us.

Production dropped in January, for the fourth month in a row, but at a somewhat smaller rate of decline than in December. Higher production levels were reported by

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22 percent of the firms; 40 percent reduced output. Since production follows new orders closely, it is not surprising that the decrease rate is slowing here also.

Employment saw another large drop, the eighth in a row and only slightly less than December's very large decline. While 11 percent added to their work force, three times as many (36 percent) pared payrolls. Employment typically lags behind the beginnings of a downturn and also lags behind the beginnings of an upturn by a few months. Thus, further declines in employment likely will occur over the next few months.

While the Arizona economy continued to weaken in January, the rate of decline was lower than in December. This does not necessarily mean that the downslide is over or that it will end soon. But is is encouraging and may signal that the bottom is not far off and that the upturn will be underway sometime during the second quarter of 1982.

The results of the January purchasing survey are shown in Table 1.

TABLE 1

JANUARY PURCHASING SURVEY

	Percent of Purchasing Managers Indicating Each Response (January compared to December)		
Key Indicators	*Higher*	*Same*	*Lower*
Prices paid for major commodities	37	50	13
Delivery time from vendors	14	56	30
Purchased materials inventory level	23	34	43
New orders received	27	34	39
Production	22	38	40
Employment	11	53	36

Source: Purchasing Management Association of Arizona and the Purchasing Management Association of Southern Arizona.

FEBRUARY

The downward economic trend slowed in February, according to results from the monthly business survey of the Purchasing Management Association of Arizona and the Purchasing Management Association of Southern Arizona. While all indicators of economic activity continued to deteriorate, the rate of decline moderated slightly. Hopefully, this is an early sign that the low point of the current recession is in sight and that a recovery will be underway before the midpoint of the year. The price indicator again verifies that the inflation rate has declined markedly over the past year and is well under control at this point.

Prices paid for major purchased items went up again in February, but the monthly increase rate was well under the previous month and the lowest recorded in over six years (since July, 1975). Twenty-nine percent of the purchasing managers faced higher prices in February; a sizable 58 percent said prices were unchanged; while 13 percent paid lower prices in February than in January. The actions of the federal government to moderate inflation have been effective, although at the cost of substantial drops in both production and employment.

Delivery time on shipments from vendors contracted again, for the fourth month in a row, showing that the economy continues to have a great deal of slack. Yet, the February decrease was only half the rate recorded in January. Shorter delivery times were enjoyed by 24 percent of the firms, compared to the 16 percent who saw lengthening vendor lead times.

Inventory levels of purchased materials dropped again in February, for the twelth consecutive month, as buyers continue to chop away at their stocks. Higher inventories were reported by 19 percent of the purchasing managers, but a very large 46 percent cut inventories. This was the largest one-month drop in the past year. As firms continue to take action to bring inventories in line with operating rates, this will extend the drop in the economy. It also means that when the overall economy does turn positive, the need to build larger inventories will intensify the upturn.

New orders received from customers fell again, for the seventh consecutive month, and at the same rate as in January. Yet, the rate of decline in both January and February was only about one-third as large as in December, which signals that the drop-off in new business bookings is not as pronounced as it was in the fourth quarter of last year. A higher new order rate was reported by 27 of the firms, compared to the 39 percent who saw their orders shrink in February compared to January.

Production dropped again in February, for the fifth straight month, but the rate of decrease was only half that which occurred in January and the lowest since October, which was the beginning of the pronounced economic downslide. Twenty-three percent of the firms raised output, but a larger 32 percent cut production.

Employment dropped again, for the ninth consecutive month, but at a rate smaller than in both December and January. Only 12 percent of the Arizona firms added to their work force; a much larger 35 percent pared payrolls. Since new hires typically lag an economic upturn by several months, employment increases are unlikely for the next several months.

February saw a further overall decline in economic activity in Arizona, but the drop in the past two months was less severe than in the last quarter of 1981. The inflation problem has been greatly diminished, at least temporarily, and the low point in the current recession likely will be reached in the next few months and a recovery should be underway by the end of the second quarter of 1982. The recovery probably will not be dramatic; yet the stage is being set for a much stronger economic performance in the last half of the year.

The results of the February purchasing survey are shown in Table 2.

TABLE 2

FEBRUARY PURCHASING SURVEY

	Percent of Purchasing Managers Indicating Each Response (February compared to January)		
Key Indicators	*Higher*	*Same*	*Lower*
Prices paid for major commodities	29	58	13
Delivery time from vendors	16	60	24
Purchased materials inventory level	19	35	46
New orders received	27	34	39
Production	23	45	32
Employment	12	53	35

Source: Purchasing Management Association of Arizona and the Purchasing Management Association of Southern Arizona.

MARCH

The economic picture continued bleak in March, although there are signs that the low point of the current recession is in sight, according to results from the monthly business survey of the Purchasing Management Association of Arizona and the Purchasing Management Association of Southern Arizona. All indicators of economic activity continued to drop, following the slide which began last summer, but the rates of decline generally are slowing. It still looks like the economy will bottom out over the next two months and that a recovery will be underway by the third quarter. The long sought after goal of a zero inflation rate was almost reached in March, which further sets the stage for an economic turnaround in the near future.

Prices paid for major purchased items went up only slightly, and the monthly increase rate was the smallest in almost seven years (since May, 1975). Higher prices were reported by 25 percent of the purchasing managers; 52 percent said prices were unchanged; and 23 percent said their firm paid lower prices in March than in February. Thus, price levels essentially were unchanged in March, compared to February. The rate of inflation has been declining steadily since July, 1981 and likely will turn into disinflation in the next month or so. The experience of the Arizona economy parallels closely the decline in the inflation rate reported by the national indicators of producer and consumer prices. Since inflation is no longer the major economic problem, efforts are now likely to focus on attacking the problem of very high interest rates, which has been curtailing construction, auto, and capital spending.

Delivery time on shipments from vendors dropped again in March, and at the same rate as in the previous month. Faster deliveries were reported by 24 percent of the firms, compared to the 16 percent who said delivery time was longer. This was the fifth consecutive month of faster deliveries, showing that vendors continue to operate at low capacity levels.

Purchased materials inventory levels registered a large drop in March, as Arizona firms take action to bring stocks into line with current operating rates. This was the thirteenth consecutive month of inventory contraction, and the March decline was the largest one-month inventory paring since June, 1975. Higher stocks were reported by 14 percent of the firms, compared to almost three times that number (46 percent) who reduced inventories. These reductions are creating a real drag on the economy, but if stocks can be brought in line with current operating rates it will intensify the strength of the upturn when it arrives.

New orders received from customers dropped again in March, for the eighth month in a row. The shrinkage in order books was much larger than in both January and February, but less than in December. Forty-two percent of the firms saw a decline in customer orders in March compared to February, double the 21 percent who saw an increase in incoming orders. This indicates that the downturn is continuing, although at a somewhat slower rate than at the end of 1981.

Production fell again, for the sixth month in a row, but the rate of decline was only half as large as in February and the smallest since last October. Twenty-eight percent of the firms raised output in March; 32 percent cut production. The monthly rate of decline has been getting smaller in each of the past four months, hopefully signaling that the production rates of Arizona firms soon will stabilize.

Employment decreased again in March, for the tenth consecutive month, and at a rate consistent with the previous two months. Higher employment was reported by 15 percent of the firms, but a much larger 37 percent pared payrolls. Further employment declines should be expected over the next few months and probably into the third quarter of 1982.

March's overall economic performance probably could be referred to as "bumping along the bottom." Declines continue on all the economic indicators and likely will extend over the next few months. Yet, the rates of decline are smaller than those of December and January, indicating that the current recession is approaching its low point. The price picture is very encouraging. We rapidly are approaching a stable price situation, which will permit the application of federal actions aimed at reducing interest rates to stimulate economic growth. Signs of a recovery should be evident by the end of the second quarter.

The results of the March purchasing survey are shown in Table 3.

TABLE 3

MARCH PURCHASING SURVEY

	Percent of Purchasing Managers Indicating Each Response (March compared to February)		
Key Indicators	*Higher*	*Same*	*Lower*
Prices paid for major commodities	25	52	23
Delivery time from vendors	16	60	24
Purchased materials inventory level	14	40	46
New orders received	21	37	42
Production	28	40	32
Employment	15	48	37

Source: Purchasing Management Association of Arizona and the Purchasing Management Association of Southern Arizona.

ARIZONA SALES OF ELECTRICAL POWER

	January 1982	*January 1981*	*One Year Percentage Change*	*January 1982*	*December 1981*	*One Month Percentage Change*
Sales of Kilowatt Hours (Thousands)	2,522.4	2,347.7	7.4	2,522.4	2,393.5	5.4
	February 1982	*February 1981*	*One Year Percentage Change*	*February 1982*	*January 1982*	*One Month Percentage Change*
Sales of Kilowatt Hours (Thousands)	2,095.5	2,157.6	-2.9	2,095.5	2,522.4	-16.9

Metropolitan Phoenix Consumer Price Index

FIRST QUARTER, 1982

Prices of goods and services in the Phoenix Metropolitan Area rose 1.6 percent during the first quarter of 1982, down from the 2.2 percent increase of the previous quarter. This figure represents the smallest quarterly increase since the fourth quarter of 1977, with the exception of the second quarter of 1980.

The Consumer Price Index (CPI) for the Phoenix Metropolitan Area, on which these inflation figures are based, is prepared by the Bureau of Business and Economic Research, College of Business Administration, Arizona State University. The quarterly CPI is based on comprehensive surveys conducted by the Bureau in cooperative cosponsorship with Valley National Bank.

The category of *Food* rose slightly this quarter, increasing 1.5 percent, and ending the slowing trend present during the last six months. The largest increases were found in Other Food at Home and in Fruits and Vegetables, rising 2.6 percent and 2.3 percent respectively. Food Away from Home rose 1.7 percent, while Food at Home rose 1.4 percent. Modest increases occurred in Dairy Products (1.1 percent) and in Cereals and Bakery Goods (0.7 percent). Meats, Poultry, Fish, and Eggs posted an increase of only 0.3 percent.

In the Other Food at Home group, carbonated drinks increased 7.3 percent and cola drinks, excluding diet cola, increased 5.8 percent. These increases were partially offset by decreases in nondairy substitutes; imitation milk; peanut butter (-3.4 percent); and salads, desserts, and baby food (-0.7 percent).

Although prices of fruit continued to decline, vegetable prices soared. Due to crop failures early in the quarter, lettuce prices increased 30.3 percent and tomatoes increased 28.9 percent. These were countered somewhat by large decreases in fresh fruits other than apples and bananas (-18.7 percent) and oranges (-7.2 percent).

All Dairy Products increased, except cheese, which decreased slightly (-0.1 percent). Fresh milk and cream increased 2.8 percent, followed by ice cream and related products, 2.2 percent.

Prices of Cereals and Bakery Products rose slightly (0.7 percent). Cereals increased 4.0 percent, and fresh pies, tarts, and frozen turnovers rose by 5.1 percent. Offsetting these increases were decreases in the subcategories of sweetrolls, coffeecakes, and fresh doughnuts (-6.4 percent) and rice and macaroni (-3.2 percent). Despite the small increase in Cereals and Bakery Products during this quarter, this category posted the largest yearly increase of any major food category (7.1 percent).

Large increases in some subgroups were countered by decreases in others to keep the category of Meats, Poultry, Fish, and Eggs relatively unchanged. Beef (other than canned, ground, roast beef, and steak) increased 13.2 percent, while lamb and organ parts decreased 15.8 percent. Fresh whole chicken rose 12.5 percent; poultry other than fresh chicken declined 7.1 percent.

The price index for *Housing* rose 2.2 percent in the first quarter, the smallest increase in this index in several quarters. Mortgage Interest Rates, after posting the largest increase in the *Housing* category last quarter, declined 3.8 percent. Home Purchase Prices increased

3.8 percent, the largest increase since the first quarter of 1980; however, this quarter's home prices are only 4.5 percent above a year earlier. Maintenance and repair commodities posted a 5.5 percent increase, the largest increase since the first quarter, 1981. Homeownership costs increased 1.8 percent, the smallest increase in the last six quarters. Many of the other *Housing* categories also showed moderate increases. Residential Rent increased 1.6 percent, slightly less than last quarter's increase of 1.9 percent, while Household Furnishings and Operations increased only 1.0 percent, the smallest increase since the third quarter of 1980. Within this subgroup, increasing prices for Household Appliances (3.1 percent) were offset by declining prices (-3.6 percent) for television sets, radios, and sound equipment.

The one *Housing* category to show a large increase during first quarter, 1982, was Fuel and Other Utilities, which rose 6.3 percent due primarily to a 12.2 percent increase in gas and electricity prices.

Apparel and Upkeep showed an increase of only 0.7 percent. Increases in Women's Apparel (4.2 percent) and Infants' and Toddlers' Apparel (7.0 percent) were offset by decreases in Men's Apparel and Boys' Apparel (down 0.4 percent and 7.7 percent respectively).

Transportation costs in the Phoenix area fell 0.8 percent in the first quarter, following three quarters of small increases; the change since one year ago is only 3.4 percent. Private Transportation costs declined 0.9 percent, due largely to a 4.1 percent reduction in gasoline prices and a fall of 4.0 percent in maintenance and repair charges. Gasoline prices have not increased for three quarters, and as a result prices are 5.6 percent lower than a year ago. New Car prices also decreased this quarter (-1.8 percent). These price decreases were moderated by a continued increase in Used Car prices (3.9 percent this quarter) and by higher vehicle finance charges (3.6 percent). Public Transportation posted a modest increase of 1.0 percent; a rise of 3.6 percent in airline fares is primarily responsible.

Medical Care costs in the Metropolitan Phoenix Area rose 4.7 percent, the third consecutive large quarterly increase for this category and the largest such increase since the fourth quarter of 1979. Major factors in this increase were higher costs for hospital rooms and services (5.6 percent) and for professional services (9.4 percent). Both physicians' services and dental services posted large quarterly increases of 6.1 percent and 16.7 percent respectively. The first decrease since the second quarter of 1979 in the cost of nonprescription drugs and medical supplies (due primarily to the reduced cost of eye care) helped to moderate the large increases in the other groups of *Medical Care*.

Entertainment costs increased 2.8 percent this quarter, due largely to increased costs of sporting goods and equipment (6.5 percent) and toys and hobbies (3.5 percent). *Other Goods and Services* increased by 1.5 percent and included increases in Personal Care Appliances (2.6 percent) and Cosmetics (2.1 percent).

The 1.6 percent quarterly consumer price increase for Phoenix is larger than that posted by Chicago, which decreased by 0.7 percent, and is also greater than the increases for the United States as a whole (1.0 percent) and for Los Angeles (1.3 percent). The accompanying table shows detailed comparisons between Chicago, Los Angeles, and the United States as a whole.

In general, the quarterly increases in the Metropolitan Phoenix Area are higher than those of Chicago and the United States, but compare favorably with Los Angeles in most categories. Phoenix showed the largest quarterly increase in *Medical Care* (4.7 percent) as compared to the United States (2.6 percent), Chicago (2.1 percent), and Los Angeles (1.6 percent).

The percentage change in *All Items* from one year ago in Phoenix (8.2 percent) is greater than that of the United States (7.8 percent) and Chicago (5.9 percent) but less than Los Angeles (9.1 percent). The one-year price increases for the Phoenix area have been larger than in the comparison cities in the categories of *Housing*, *Apparel and Upkeep*, and *Entertainment*. However, in both *Transportation* and *Other Goods and Services* the increases in Phoenix over the past year have been less than in the comparison areas.

METROPOLITAN PHOENIX CONSUMER PRICE INDEX
FIRST QUARTER, 1982
(1977=100)

Group	*Fourth Qtr. 1981 Index*	*First Qtr. 1982 Index*	*Percentage Change From Last Quarter*	*Percentage Change From One Year Ago*	*1969 Base Index*
ALL ITEMS	165.5	168.1	1.6	8.2	261.2
Food and Beverages	149.8	152.3	1.7	5.3	238.0
Food	150.8	153.1	1.5	5.1	243.3
Food at Home	150.8	153.0	1.4	4.5	253.9
Cereals and Bakery Products	155.3	156.4	0.7	7.1	254.4
Meats, Poultry, Fish, Eggs	150.1	150.6	0.3	2.2	239.5
Dairy Products	146.6	148.3	1.1	2.9	223.9
Fruits and Vegetables	149.1	152.5	2.3	1.4	263.0
Other Foods at Home	142.1	145.8	2.6	4.5	282.4
Food Away From Home	148.5	151.0	1.7	6.5	221.7
Housing	183.3	187.2	2.2	11.1	270.9
Shelter	202.8	206.4	1.8	11.0	286.5
Rent, Residential	138.3	140.6	1.6	5.9	190.2
Homeownership	226.0	230.1	1.8	12.3	307.2
Financing, Taxes, Insurance	233.8	238.1	1.8	12.5	*
Mortgage Interest Rates	208.5	200.6	-3.8	23.1	*
Home Purchase Price	184.3	191.3	3.8	4.5	*
Fuel and Other Utilities	136.0	144.6	6.3	16.2	288.0
Electricity and Utility Gas	143.8	161.3	12.2	20.7	*
Furnishings and Operations	135.8	137.2	1.0	7.3	212.3
Apparel and Upkeep	129.1	130.0	0.7	6.8	189.6
Transportation	164.0	162.7	-0.8	3.4	270.7
Private Transportation	161.1	159.7	-0.9	2.8	266.0
New and Used Cars	147.6	149.3	1.2	10.9	*
Gasoline	219.6	210.3	-4.2	-5.6	*
Public Transportation	217.1	219.4	1.0	14.3	354.7
Medical Care	156.6	163.9	4.7	11.9	360.7
Entertainment	150.6	154.9	2.8	9.7	225.3
Other Goods and Services	132.1	134.1	1.5	7.9	240.9

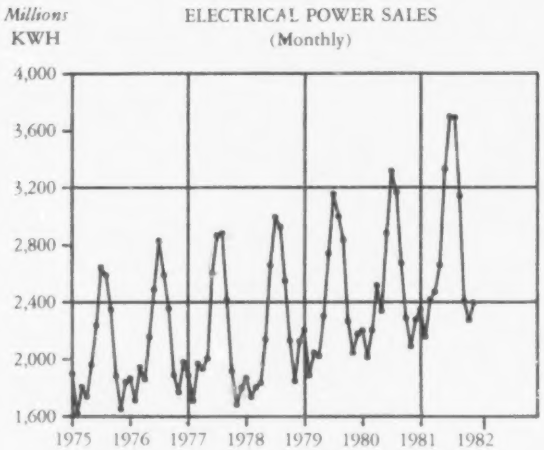
* 1969 base index is not available.

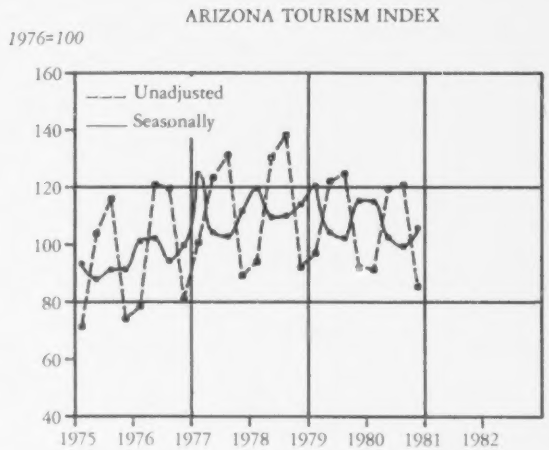
UNITED STATES AND COMPARATIVE CITIES
FIRST QUARTER, 1982

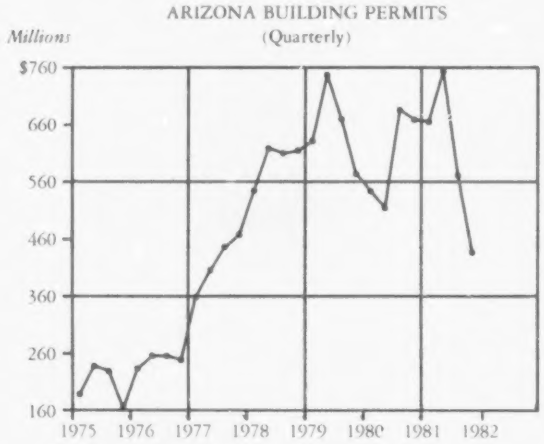
	United States		*Chicago*		*Los Angeles*	
Group	*Percentage Change From Last Quarter*	*Percentage Change From One Year Ago*	*Percentage Change From Last Quarter*	*Percentage Change From One Year Ago*	*Percentage Change From Last Quarter*	*Percentage Change From One Year Ago*
ALL ITEMS	1.0	7.8	-0.7	5.9	1.3	9.1
Food	2.2	4.6	1.0	5.9	2.4	4.9
Food At Home	2.6	4.0	1.9	1.5	3.1	5.5
Food Away From Home	1.3	5.8	-0.8	1.5	1.1	3.7
Housing	1.0	9.4	-1.8	7.1	0.8	10.3
Shelter	0.7	9.7	-2.8	6.7	0.2	10.4
Fuel and Utilities	2.2	10.7	1.8	9.6	7.0	17.8
Household Furnishings & Operations	1.3	7.1	0.1	7.0	1.0	5.6
Apparel and Upkeep	-1.7	3.3	-3.9	4.2	-1.0	3.4
Transportation	-0.4	6.3	-1.2	5.6	2.0	10.0
Medical Care	2.6	11.9	2.1	10.0	1.6	17.1
Entertainment	1.9	6.7	3.5	7.9	2.1	6.5
Other Goods and Services	1.8	10.0	1.6	10.0	2.1	11.4

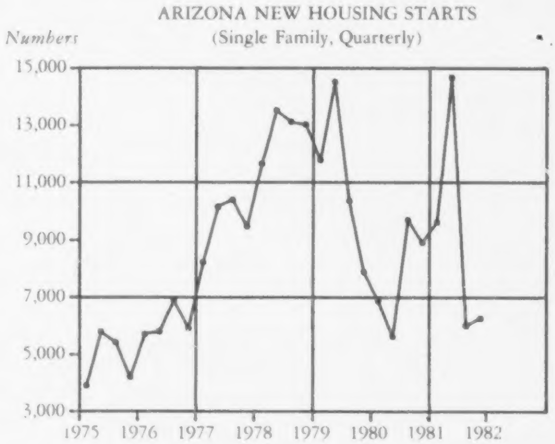
Source: Metropolitan Phoenix data compiled by the Bureau of Business and Economic Research, College of Business Administration, Arizona State University, in cosponsorship with Valley National Bank; other data from U.S. Department of Labor, Bureau of Labor Statistics, Washington, D.C.

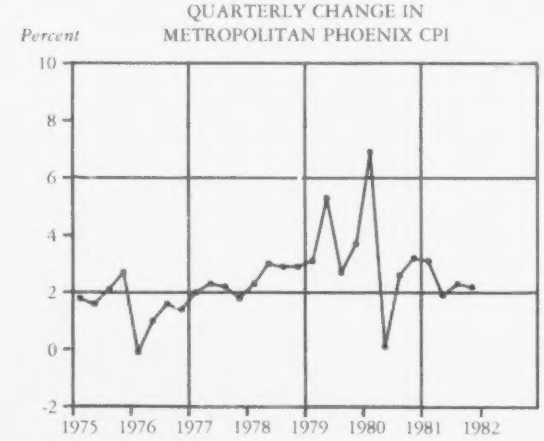
Arizona Economic Indicators

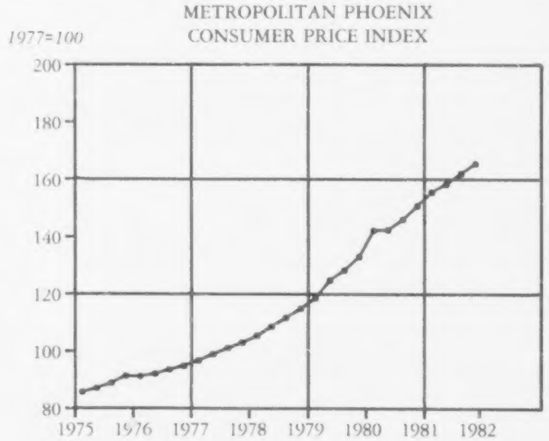

ELECTRICAL POWER SALES
(Monthly)


ARIZONA TOURISM INDEX


ARIZONA BUILDING PERMITS
(Quarterly)


ARIZONA NEW HOUSING STARTS
(Single Family, Quarterly)


QUARTERLY CHANGE IN
METROPOLITAN PHOENIX CPI


METROPOLITAN PHOENIX
CONSUMER PRICE INDEX

Source: All data compiled by the Bureau of Business and Economic Research, College of Business Administration, Arizona State University.

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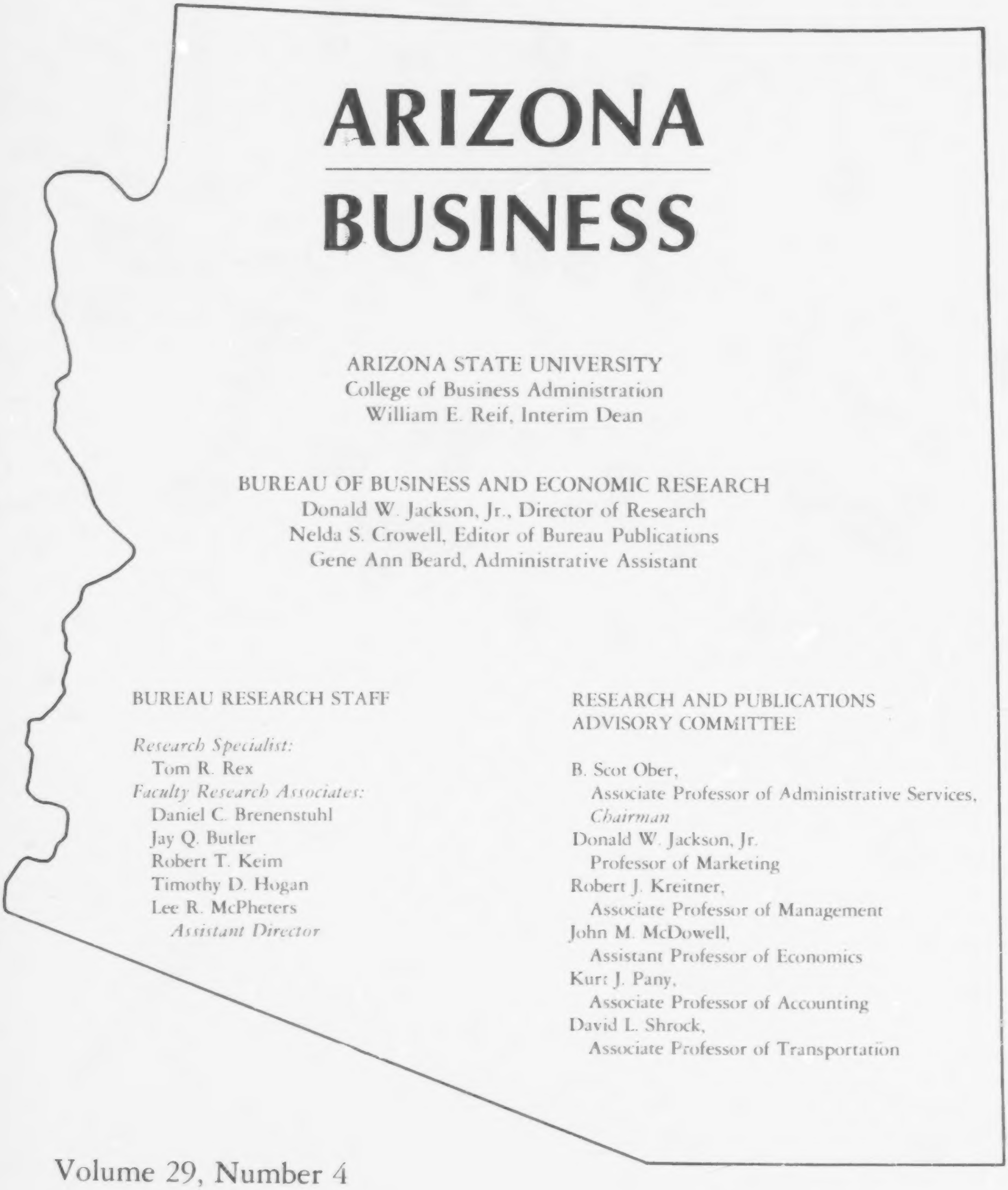

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Report To The Reader

The problems in delivery of health care have become the subject of daily headlines, the topic of numerous committee reports, and a prime concern of business leaders around the country. Attention is focused not on the quality of care or on the technical advances, but rather, on the rapidly escalating costs.

Articles in this issue of *Arizona Business* bring into closer view the problems and proposed remedies for the health care delivery system in Arizona. The first article highlights how changes in the marketplace influence the growth and direction of Arizona's hospitals. While approximately half of all health care dollars are spent for in-patient care, hospitals are vitally interested in the cost containment issue because it determines their own financial viability. Hospitals are also the most organized and vocal segment of the health care industry in determining cost control measures and expansion of services and facilities.

Since the delivery of health care is labor intensive, the second article focuses on how to maximize the productivity of professional employees in health care settings. The conclusions are applicable in any business that utilizes employees who vary in training and attitudes toward work.

New approaches to the organization and financing of medical care delivery are presented in the final two articles. Dr. Frank Williams describes Arizona's alternative to Medicaid, the Arizona Health Care Cost Containment System (AHCCCS), and its potential impact on the state's health care delivery system. The AHCCCS program is based upon use of health maintenance organizations instead of the traditional county system for indigent health care.

While HMOs have been in existence for 50 years, widespread interest in their potential as a cost-saving strategy has developed only in the past decade. Dr. Robert Gwinner presents an up-to-date look at the varieties of HMOs and their significance as an option to the traditional fee-for-service system.

Health care is big business, in terms of persons employed as well as the cost to taxpayers, employers and families. As such, it is a topic of considerable significance for *Arizona Business* readers.

Suzanne Dandoy
Consulting Editor

Dr. Suzanne Dandoy is Professor in the Center for Health Services Administration in the College of Business Administration, Arizona State University.

The Changing Health Care Environment: Implications for Arizona's Hospitals

STEVEN D. WOOD
RONALD KRAUSE
STEPHEN W. BROWN
LYNN DAVIS

Recent years have witnessed financial, organizational, and marketing policy shifts in the health services industry. As a significant economic force in Arizona, hospitals have become increasingly sophisticated, and a trend toward multihospital systems has emerged.

Steven D. Wood is Associate Professor of Quantitative Systems in the College of Business Administration, Arizona State University. Ronald Krause is President of the Arizona Hospital Association. Stephen W. Brown is Professor of Marketing in the ASU College of Business Administration. Lynn Davis is Staff Assistant for the Arizona Hospital Association.

A popular television commercial ends with the statement, "If you don't have your health, you don't have a thing," reminding us that good health is a precious personal asset. To the extent that longevity is a proxy for health, Americans are healthier as they *are* living longer. The average life span increased by approximately 2.7 years during the 1970s.

In the 1950s and 1960s, access to medical care seemed to evolve from a privilege to a right for a majority of Americans. Business and industry significantly increased their employee health care benefits. Between 1968 and 1980, health benefit costs supported by private and public employers increased an average of 300 percent. Expenditures for health care in the United States rose from about $75 billion in 1970 to well over $200 billion in 1980. Health care currently represents approximately 9 percent of the gross national product resulting in health care being the third largest industry in the country. It has indeed become big business.[1]

Hospitals form the centerpiece of this industry. As businesses, hospitals employ a significant labor force, invest heavily in equipment and facilities, and consume substantial materials, supplies, and professional services. This article briefly highlights several issues affecting hospitals, viewed within the context of a changing health care environment. Two of the most significant change stimuli are regulation and, in a related sense, intensified competition. Both of these forces and their impact on the hospital industry are examined in the succeeding sections. The article also offers a profile of the Arizona hospital industry with details on location, ownership, services, work force, expenditures, and earnings.

REGULATION

Hospitals represent a major proportion of the health care dollar. The American Hospital Association reports that U.S. expenditures in hospitals increased 293 percent between 1970 and 1980. In Arizona, for the comparable period, the increase was an even more dramatic 405 percent (from $164 million to $664 million).[2] Costs and their containment have been the major perspective from which the health care industry, particularly the hospital segment, has been viewed during the last decade.

Rapid cost increases have spawned reaction from citizens, insurance groups, employers, and governmental bodies resulting in extensive voluntary and mandatory regulations (Certificate of Need,[3] Rate Review, Appropriateness Review, Medicare regulations). Most of these focus directly on nonfederal, short-term hospitals. Physicians, certain forms of professional corporations, and in some cases, health maintenance organizations (HMOs) may completely avoid the costly Certificate of Need and Rate Review. This inconsistent application of regulations has, in fact, been cited as one of the reasons why Certificate of Need and Rate Review are seen as unsuccessful in motivating effective cooperative planning, constraining health services growth, or containing cost.

In Arizona, Certificate of Need will be repealed in August, 1984, allowing more aggressive and widespread competition among all types of providers. However, providers with marginal asset bases and/or operational surpluses may then have difficulty obtaining capital development financing. Rate Review will continue but in a form that eliminates a majority of the public hearing process, relying instead on negotiations between the provider and the Arizona Department of Health Services.

A further aspect of regulation is the increase in hospital systemization through mergers, acquisitions or affiliations. Such moves draw attention from antitrust enforcement agencies and other providers who believe the ability to compete effectively has been limited. In addition, national economic strategies will likely reduce the level of health care benefits, reduce payments to health care providers, and reduce the number of eligible beneficiaries, while shifting the financial burden to states, individuals, and/or employers.

COMPETITION

The shift in regulatory emphasis is a reflection of the government's interest in marketplace competition as a means for controlling health care costs. One approach to health care competition theory goes something like this:

> If regulatory barriers are removed and free market forces are allowed to rule, all the forces that now work to stimulate demand and hide the real cost of care would gradually disappear. Insurers would become more inventive in the kinds of benefit packages they design, consumers would have a more direct financial stake—and therefore, greater interest—in the cost of their own health care, and doctors and hospitals would have incentives to deliver care more efficiently.[4]

Some observers truly believe the underlying cause of all our problems is the absence of market forces in the medical care system. In reality, however, the laws of supply and demand cannot fully apply to the health care industry. The economics of marketplace action generally assume an informed consumer who may select services and bear the consequences. With health services, however, the patient frequently has no valid selection criteria to employ, is not substantively involved in some of the major selection decisions (e.g., type of service or where service is to be performed), and is insulated in many ways from the consequences of action taken.

With hospitals, use patterns and equipment requirements are typically guided by the medical staff, which is not under day-to-day hospital control. Although patients are the ultimate consumers of health care, physicians are primarily hospital clients through their admission and referral patterns. In the open-staff situations that predominate in Arizona, marketing for physician activity can consume considerable administrative effort and other hospital resources.

This situation suggests that for competition to exist and accomplish its intended goals, the health care system must be changed. To assure the maintenance of quality care, it is generally agreed that this change must be evolutionary. Many observers believe that direct price competition cannot and should not fully control health care delivery in the United States. Such an uncontrolled market situation might result in cessation of hospital teaching programs for doctors and paraprofessionals, denial of care for the poor, the fragmentation and dispersion of hospital services, and the abandonment of the more sophisticated and expensive forms of care.

Nevertheless, it is clear that competition in some form is already operating and broadening its impact. This is coupled with the hospitals' efforts to enhance quality of care and hold the line on spiraling health care costs. As a result, many alternatives to hospitalization have evolved. Outpatient services have flourished. Medical and pharmacological technology have substantially reduced or eliminated the need for hospitalization in selected cases. The average length of stay has decreased. Medical practices have, as in child delivery, reduced the duration and intensity of hospital resources required to provide the services. Physicians have developed their own programs and facilities outside the hospital and more actively promoted their use. Health maintenance organizations (HMOs) claim their prepaid approach to health care significantly reduces hospitalization requirements.

Another notable competitive experiment is the Arizona Health Care Cost Containment System (AHCCCS) recently passed by the state as an alternative to Medicaid. Providers of many types will be bidding for the right to offer complete or partial health services to defined indigent, small business and, potentially governmental populations. (See article on page 15 of this issue of *Arizona Business.*)

In addition to these forms of competition, hospitals are also affected by changing attitudes toward fitness and treatment. More individuals are assuming greater responsibility for and control over their health. An increasing number of Americans exercise regularly and adhere to some form of dietary and personal health management. Individuals are embracing health promotion activities and are beginning treatment farther down the professional ladder (e.g. home remedies, pharmacists, etc.). This self-reliant attitude has generally resulted in a healthier population and less hospitalization.

HOSPITAL INDUSTRY RESPONSE

Changing regulatory and competitive environments have necessitated significant reaction from the hospital industry. Major changes initiated by many hospitals include adopting better business practices, diversifying services offered, restructuring organizations, marketing more aggressively, and participating in business-industry-governmental coalitions.

Business Practices

Prior to the 1960s, hospitals were frequently managed by individuals with limited professional management experience — physicians or employees, or in the case of religious order hospitals, from the delegated church administration. During the late 1960s and through the 1970s, the size, complexity and competitiveness of the hospital industry grew and multihospital systems evolved. Professional management and the adoption of more sophisticated business practices became a necessity. Hospitals now employ specialists in finance, personnel, planning, marketing and capital fund development.

Hospitals are also diversifying into nontraditional hospital services. Outreach health services, freestanding clinics, medical office buildings, emergency transportation systems and many other forms of additional health services are being developed to maintain or expand service areas. Included are long-term care, hospice care, occupational health programs, workplace testing and treatment, health promotion, prevention and screening, community and social health, psychiatric services, and other programs.

Organizational Restructuring

Nonfederal, short-term hospitals are restructuring their organizations to accommodate these diversified activities and obtain more favorable treatment from the existing cost reimbursement programs such as Medicare. Hospitals may organize certain support services (e.g. laundry, dietary) into separate entities and contract with the hospital at reasonable, but more profitable, rates than would have been possible under internal organization. This also allows the support services to be marketed more effectively beyond the individual hospital. Restructuring also allows greater opportunities for acquisition, mergers, affiliations, and the development of larger amounts of capital through an expanded asset base and market potential.

Marketing

Hospitals are also marketing more astutely and more aggressively. More hospitals are utilizing market research to assess the potential for new and existing services. This research, in turn, is being used to both identify target markets and tailor marketing mix variables (i.e. product, pricing, distribution and promotion) to these population segments. Consequently many hospitals are extending and repackaging services. Promotion efforts have also increased on television, radio, billboards, and magazines. Hospitals are particularly active in developing arrangements with captive audiences (e.g. employers, unions) for the provision of health care needs.

Business-Industry-Government Coalitions

Hospitals are also involved in coalition efforts with business, industry, insurers, and government to address issues of delivering high quality health care at reasonable cost. As an example, on January 14, 1981, The American Hospital Association and five other major national organizations announced their commitment to work together through local-level coalitions. Other partners in the initiative include the Business Roundtable, AFL-CIO, American Medical Association, Blue Cross and Blue Shield, and the Health Insurance Association of America. Similar business-health coalitions have been tentatively defined in Arizona. The Arizona Hospital Association is expected to lead the formal establishment of a coalition similar to the national effort.

THE ARIZONA HOSPITAL INDUSTRY

With this general background of selected factors affecting the health care industry and the hospital industry response, this article reviews the characteristics and magnitude of the hospital industry with special attention to Arizona.

Location/Ownership of Hospitals

Hospitals exist in every Arizona county with the majority concentrated in the Phoenix/Tucson areas (Table 1). Most hospital beds are controlled by not-for-profit organizations. An important trend is the increase of multihospital systems. At present a minimum of 302,000 hospital beds nationally come under system ownership or management. Twenty-one years ago, 76 multihospital systems managed 334 hospitals. By 1980, there were 256 systems with 1,877 member hospitals. Experts predict by the year 1990, more than 90 percent of the country's nongovernment hospitals will be affiliated with such a system. Today, more than 52 percent of Arizona's total beds are owned or managed by thirteen multi-institutional systems.[5]

TABLE 1

NUMBER OF LICENSED HOSPITAL BEDS IN ARIZONA BY LOCATION AND OWNERSHIP

County	*For Profit*	*Nonprofit*	*Federal*	*Total*
Apache		70	76	146
Cochise		270	95	365
Coconino		135	108	243
Gila		247	36	283
Graham		36		36
Greenlee		74		74
Maricopa	508	6,280	802	7,590
Mohave		171		171
Navajo		100	88	188
Pima	231	2,162	455	2,848
Pinal	74	155	30	259
Santa Cruz ...		57		57
Yavapai	11	245	217	473
Yuma		259	20	279
TOTAL	824	10,261	1,927	13,012

Source: Arizona Department of Health Services, 1982

Services

Arizona hospitals have, at a minimum, kept pace with hospitals nationally in their expansion of scope and sophistication of services. Hospital beds increased in number by 41 percent between 1970 and 1980. And, as shown in Table 2, the decade from 1970 to 1980 witnessed a substantial increase in the proportion of hospitals offering more sophisticated services (e.g. open heart surgery, x-ray therapy, diagnostic radioisotope). The largest percentage gains came with therapy, rehabilitation, social and psychiatric services. Hogan[6] cites four fundamental reasons this has occurred:

- Widespread coverage of public and private hospital insurance has reduced the cost consciousness of the patient.
- Physicians largely control the use of hospital resources; potential malpractice threats and limited physician awareness of costs results in requests for more rather than fewer services.
- Historical not-for-profit orientations of many hospitals have emphasized growth and quality of care.

TABLE 2

PROPORTIONS OF ARIZONA HOSPITALS OFFERING VARIOUS FACILITIES AND SERVICES 1970 - 1980

	1970	*1975*	*1980*	*Percentage Change*
Recovery Room	62.3	73.0	84.9	36.3
Open Heart Surgery ...	6.5	8.1	9.6	47.7
Pharmacy With Full-time Pharmacist	70.1	83.8	93.2	33.6
X-Ray Therapy	13.0	17.6	15.1	16.0
Diagnostic Radioisotope Facility	26.0	33.8	56.2	116.2
Therapeutic Radioisotope Facility	13.0	20.3	20.5	57.7
Organ Bank	0.0	4.1	5.5	*
Blood Bank	50.6	56.8	82.2	65.0
Histopathology Lab ...	29.9	39.2	58.9	97.0
Electro-Encephalography	24.7	32.4	50.7	105.3
Premature Nursery	20.8	12.2	24.7	18.8
Physical Therapy	51.9	71.6	83.6	61.1
Occupational Therapy ..	18.2	28.4	41.1	219.0
Outpatient Rehabilitation Dept.	13.0	16.2	38.4	195.4
Outpatient Psychiatric Dept.	19.5	31.1	24.7	26.7
Psychiatric Partial-Hospitalization	9.1	14.9	13.7	50.5
Psychiatric Emergency Room Services	13.0	33.8	34.2	163.0
Psychiatric Consultation & Education	14.3	31.1	32.9	132.0
Outpatient Dept.	54.5	45.9	54.8	.6
Emergency Room	85.7	87.8	67.1	-21.7
Social Work	46.8	67.6	86.3	84.4
Family Planning	15.6	21.6	20.5	31.0
Genetic Counseling	3.9	5.4	5.5	41.0
Home Care Dept.	11.7	2.7	17.8	137.6

* Due to zero initial proportion, percent increase is not computed.

Source: American Hospital Association, *Hospital Statistics*, 1971, 1976, 1981 editions, Chicago: American Hospital Association.

- Many hospitals receive the majority of their revenues based on retrospective cost reimbursement resulting in limited incentive for cost containment.

In addition to the increased scope of services, nonfederal, short-term Arizona hospitals are serving both a larger population and larger share of the population. As Table 3 reveals, Arizona population increased 51.7 percent between 1970 and 1980 while hospital admissions rose by over 50.4 percent. These increases outstripped the comparable national measures. In Arizona, the average length of stay and occupancy rate declined by .6 days and 2.6 days respectively. These were comparable to national figures.[7]

Purchases

The health care industry, and hospitals in particular, purchase substantial goods and services from the labor and capital market. This is particularly true with the work force. As of June, 1981, health services in Arizona employed nearly 55,000 persons, an increase of more than 5 percent over the prior year, making health care one of the fastest growing employers in the state. Hospitals employed the majority of these workers who contribute approximately 4 percent of Arizona's labor force. From another perspective, Arizona's nonfederal, short-term hospital work force has more than doubled between 1970 and 1980 with payroll costs experiencing a 319 percent increase in the same time period.[8]

Of the total hospital work force, physicians and dentists comprise 3.2 percent, registered nurses 23.2 percent, licensed practical nurses 6.1 percent, and other salaried personnel 67.6 percent.[9] Nearly three-fourths of the hospitals' employees are typically classified as white collar workers.

Nonpayroll expenditures (supplies, equipment, etc.) in nonfederal, short-term Arizona hospitals increased over 485 percent between 1970 and 1980 for an overall operating cost increase of nearly 405 percent. Thus, while health care cost escalation has been a cause for community concern, uncontrollable inputs have been a major source of increase. Hogan's[10] study of cost increases indicates that almost two-thirds of the total cost increases for both Arizona and United States hospitals during the 1970-1976 period could be attributed to higher wages, materials prices, and rapid technological change. Hospitals also purchase and develop significant capital assets. Most communities can point to hospitals as major architectural statements in the area. Hospital plant assets in Arizona increased from approximately $135 million in 1970 to $654 million in 1980, a growth of 483 percent.

TABLE 3

SELECTED STATISTICAL DATA FOR NONFEDERAL, SHORT-TERM ARIZONA AND U.S. HOSPITALS 1970 - 1980

	Arizona					*United States*				
	1970	*1975*	*1980*	*Numerical Change*	*Percentage Change 1970-1980*	*1970*	*1975*	*1980*	*Numerical Change*	*Percentage Change 1970-1980*
Population (000)	1,792	2,207	2,719	927	51.7	203,298	N/A	223,889	20,591	10.1
Admissions ..	235,601	295,532	354,308	118,707	50.4	29,251,655	33,434,659	36,143,445	6,891,790	24.0
Beds	6,420	8,089	9,077	2,657	41.4	848,232	941,844	988,387	140,155	16.5
Average Stay (days) ...	7.6	7.4	7.0	-0.6	-7.9	8.2	7.7	7.6	-0.6	-7.3
Average Occupancy Rate (Percent)	76.8	74.3	74.2	—	-3.4	78.0	75.0	75.6	-2.4	-3.1
Total Operating Cost ($000) ..	$164,088	$384,199	$829,231	$665,143	405.3	$19,559,675	$38,961,563	$76,851,146	$57,291,471	292.9
Payroll ($000)	$89,703	$187,080	$376,128	$286,425	319.3	$11,420,906	$20,652,510	$37,378,600	$25,957,694	227.3
Nonpayroll ($000)	$74,385	$197,119	$453,103	$378,718	509.1	$8,138,769	$18,309,053	$39,472,546	$31,333,777	385.0
Personnel ...	15,725	22,326	29,936	14,211	90.4	1,928,720	2,391,656	2,873,064	944,344	488.6

Source: American Hospital Association, *Hospital Statistics*, 1971, 1976, 1981 editions, Chicago, Illinois.

Earnings

While most hospitals are currently classified as not-for-profit, earlier *Arizona Business* articles[11] have pointed out that most do, in fact, accrue income. A review of revenue data compiled by the Arizona Department of Health Services reveals an average of about 4 percent return when net income is considered with respect to gross patient revenue. The net income figures for hospitals in 1979 spanned a range from a negative 15.6 percent return to a positive 9.7 percent.[12]

Regardless of categorization, it is necessary for hospitals to obtain surpluses to fund capital and equipment acquisitions. As the tax exempt bond market historically available to not-for-profit hospitals becomes less available and/or attractive financially, the requirements for surpluses will become even greater if advancing health care technology is to be continually provided. To alleviate potential technology funding problems, the Arizona Hospital Association in January, 1982, became sponsor-originator of a hospital equipment loan program. This program will offer Arizona hospitals the opportunity to finance equipment purchases by means of a bond issue through the Arizona Health Facilities Authority.

CONCLUSION

The air is changing rapidly in the health care industry. Rising costs, changing regulations, and competitive factors are significantly altering the nature of the industry in general, with particular attention to hospitals.

Public employer and governmental actions are moving hospitals toward traditional competitive business attitudes. Hospitals are engaging in more elaborate marketing practices, expanding and diversifying their services, and engaging in ventures outside the recognized health services industry.

It should be remembered that these changes are occurring at a blurring pace. Within a generation, the hospital industry has grown from a charity-based "cottage" stature to one of the country's most significant industries. The past few years have witnessed financial, organizational, and marketing policy shifts that have taken other industries decades to manage. Arizona will continue to assume a leadership role in the procompetitive movement underway nationally, sponsored in part by the AHCCCS program and developing coalition efforts.

Fortunately, most people witnessing or involved in the industry's reorientation agree that a quality health care system is important to Arizona's citizens and the state's economy. The intense interest has also surfaced that Arizona hospitals form a major and growing segment of this state's health care industry as well as its general industrial base. It is being recognized that hospitals have been and should continue to be strong contributors to the social and economic well-being of their communities.

Within a changing regulatory and competitive environment, it is important that business and hospital leaders understand one another and seek to form meaningful, cost-effective, alliances that will protect and enhance the future and quality of health care in Arizona. Evidence exists that Arizona's hospital leadership is becoming increasingly postured to meet these challenges.

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[1] Edward S. Sekscenski, "The Health Services Industry: A Decade of Expansion," *Monthly Labor Review*, May, 1981, pp. 9-15, 42.

[2] American Hospital Association, *Hospital Statistics*, 1971-1981 Editions, (Chicago, Ill.: American Hospital Association).

[3] Certificate of Need is a regulatory process in which certain halth care providers wishing to offer new or expanded services, obtain equipment or build structures exceeding a certain cost figure, must engage to obtain a license for the services/facilities from their respective states. The process involves both lay citizen and governmental agency review through public hearing processes.

[4] "Report of the Marketplace Task Force," California Hospital Association, May 14, 1981.

[5] C. V. Clines, "The Quiet Revolution in Hospital Management," *Nation's Business*, December, 1981, pp. 38-42.

[6] Timothy D. Hogan, "Hospital Cost Inflation in Arizona," *Arizona Business*, May, 1978, pp. 22-23.

[7] *Hospital Statistics*, 1971, 1976, and 1981 Editions.

[8] Arizona Department of Health Services, *Uniform Reporting Data*, 1980.

[9] Arizona Department of Economic Security, *Arizona Occupational Profiles*, June, 1978, p. 28.

[10] Hogan, "Hospital Cost Inflation," p. 22.

[11] Ibid, and Robert L. Knox, "Economic Decision Making in Arizona Hospitals: A Comparative Analysis," *Arizona Business*, November, 1973, pp.

[12] Arizona Department of Health Services, *Uniform Reporting Data*, 1979, pp. 58-60.

Improving Performance in Health Services Organizations

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The increasing costs and complexity of business are pressuring managers to find new ways to motivate professional employees and thus increase productivity. In responding to the pressure, managers have a tendency to simplify the situation by applying a single strategy that is supposed to have universal application. The assumption is that most people have similar values and work expectations and seek the same kinds of organizational rewards.

In the health industry, for example, articles reporting surveys of nurses regularly identify factors such as autonomy and sense of achievement as most important for job satisfaction and performance. These factors, along with esteem and self-actualization, are commonly referred to as higher-order needs and are often assumed to be strong motivators of professional employees.

While the satisfaction of higher-order needs may be important to some people, it is likely that all professionals are not of the same mold and may respond very differently to a set of organizational rewards. Time-honored motivational strategies and general approaches to performance improvement may or may not be effective in a given work situation or with a particular group of employees. Instead, managers should design performance improvement strategies that satisfy the values, needs and work expectations of their employees. Instead of assuming that most employees will work hard to receive certain types of organizational rewards, whether it be autonomy or time off, administrators are urged to find out what employees want most from their work experience and then design the reward system accordingly.

POSITIVE REINFORCEMENT AS A PERFORMANCE IMPROVEMENT STRATEGY

Within the past few years, managers have achieved considerable success by applying positive reinforcement to work situations. This strategy is based upon the Law of Effect, which states that behavior with favorable consequences tends to be repeated, and behavior with unfavorable consequences tends to disappear and be replaced by other behaviors. From a practical standpoint, the Law of Effect says that people behave in ways that pay off to them. Managers can thus improve job performance if they can first, specify the behaviors that lead to performance; second, identify positive reinforcers (consequences)

Positive reinforcement is an important strategy for improving performance in any field of endeavor, but it is particularly well suited for use in the health services industry. The key to using such strategy is in determining which organizational rewards will be most effective.

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that control those behaviors; and finally administer positive reinforcers when desired behavior occurs.[1]

Unlike more traditional human relations approaches, which are intent upon looking *inside* people for the causes of behavior, positive reinforcement looks *outside* the person for factors or events that can be used to control productive behaviors. Positive reinforcement does not depend upon changing employees' attitudes (or other "inner states" such as needs, values, motives, drives) as a means of increasing job performance. Rather it focuses directly on the job itself and the kinds of job-related behaviors that lead to desired results. From a manager's standpoint, an important advantage of positive reinforcement over traditional strategies is that it enables administrators and professionals to control the factors that can be used to effect positive changes in job performance.

In the health services industry, for example, one of the attractions of positive reinforcement as a performance improvement strategy is that, more than in any other social institution, the contribution of human resources is closely tied to the level of services provided. Positive reinforcement is ideally suited for labor intensive situations in which the job-related behaviors of employees directly affect the organization's ability to achieve its objectives, in this case, high quality, cost-effective patient care.

One of the limiting factors in applying positive reinforcement, however, is knowing specifically which positive reinforcers are the most potent in terms of their ability to elicit desired responses. If managers are going to improve the quality and cost-effectiveness of their service by systematically reinforcing productive work behavior, they must know which reinforcers are the ones that employees will exert extra effort to receive.

To illustrate the application of positive reinforcement, this article reports the results of a study to determine empirically the kinds of organizational rewards that have high (and low) potential as positive reinforcers for two groups of hospital employees — registered nurses and laboratory technicians.[2] Although the study sample involved a limited number of employees and was restricted to the health care industry, the implications regarding performance improvement strategies are meaningful for managers in all sectors of business.

COLLECTING REWARD PREFERENCE DATA

The questionnaire that was used consisted of thirty-one items, which represented the hospital's organizational reward system.[3] Exhibit 1 lists the thirty-one items by reward category. Eleven items represented the four *intrinsic* reward categories. Twenty items represented the hospital's four *extrinsic* reward categories. Extrinsic rewards are payoffs granted to the individual by others; intrinsic rewards are self-granted, internally experienced payoffs.

A questionnaire using a seven-point scale recorded employees' perceptions of "importance" and "satisfaction with" the thirty-one reward items. This format is derived from expectancy theory, which states that motivation depends on the value one places on a reward plus one's perception of the effort required to obtain the reward and the probability of receiving the reward. Exhibit 2 shows the three questions asked for each item. The degree of dissatisfaction with the current application of a particular reward was computed by subtracting the answer for question (a) "How much is there now?" from question (b), "How much should there be?" For example, if an employee circles "3" for question (a) and "4" for question (b), a score of "1" was recorded for that item. Larger scores indicate a greater degree of dissatisfaction. The perceived importance of each reward item was determined by the number the employee circled for question (c). If, for example, a "7" was recorded for the sample question, it would indicate that direct pay was considered to be a potent reward — one that would have high potential as a positive reinforcer of job behavior.

Thirty-four employees (thirty women and four men) from one hospital participated in the study. All were nonsupervisory personnel and represented two functional areas: nursing (sixteen employees) and the laboratory (eighteen employees). These two groups were chosen because they represent areas of high and low patient contact respectively and would provide a comparison of reward preferences between two major types of health services employees.

Results of the Survey

The importance and dissatisfaction mean scores for each reward item for registered nurses and laboratory technicians are shown in Table 1. The same information for the eight reward categories is shown in Tables 2 and 3. For managers who are willing to conduct the type of analysis recommended in this article, the payoff comes from being able to identify specific organizational rewards that have the greatest potential for serving as potent positive reinforcers for employees. Exhibit 3 presents the performance-reward payoff matrixes for the nurses and lab technicians who participated in this

EXHIBIT 1

ORGANIZATIONAL REWARD CATEGORIES FOR A HOSPITAL

Intrinsic Reward Categories

1. SOCIAL
   - Opportunity to help people
   - Opportunity to develop friendships
2. ESTEEM
   - Feeling of self-esteem
   - Prestige inside hospital
   - Prestige outside hospital
3. AUTONOMY
   - Opportunity for independent thought and action
   - Authority in position
   - Opportunity to participate in goal setting
4. SELF-ACTUALIZATION
   - Opportunity for growth and development
   - Feeling of self-fulfillment
   - Feeling of worthwhile accomplishment

Extrinsic Reward Categories

1. DIRECT ECONOMIC REWARDS
   - Direct pay
   - Overtime pay
   - Salary/wages
   - Incentive plans
   - Cost of living adjustment
2. INDIRECT ECONOMIC REWARDS
   - Retirement benefits
   - Life insurance benefits
   - Health insurance benefits
   - Disability insurance benefits
   - Sick or absence pay benefits
   - Vacation policy
   - Lunch, rest, break time
   - Educational opportunities
   - Recreation program
   - Holidays
   - Shorter work week
   - Flexible scheduling of hours
3. SECURITY
   - Security in job
4. WORKING CONDITIONS
   - Working conditions associated with the job

Source: Developed by the authors.

EXHIBIT 2

SAMPLE QUESTION

The direct pay for my position

	Min						Max
(a) How much is there now?	1	2	3	4	5	6	7
(b) How much should there be?	1	2	3	4	5	6	7
(c) How important is this to me?	1	2	3	4	5	6	7

Source: Survey conducted by the authors.

study. The assumption is that rewards perceived as both important and dissatisfying are potentially strong reinforcers. In other words, people will work hard to get more of something that is important to them and of which they are not currently getting enough. Rewards that are both relatively unimportant and quite satisfying to employees are considered weak reinforcers and would not be expected to have much effect on performance.

The significance of extrinsic rewards as potential positive reinforcers is evident from the results shown in Table 1. For nurses, seven of the twelve most important rewards are extrinsic. Furthermore, eleven of the twelve rewards with which they were *most dissatisfied* are extrinsic. In addition, the six items that appear on both top twelve lists and would be strong reinforcers — that is, the ones perceived as both highly important and highly dissatisfying — are all extrinsic rewards: sick pay benefits, cost of living adjustment, health insurance benefits, salary/wages, direct pay, and working conditions.[3]

The pattern of responses for lab technicians is similar to that of registered nurses. Nevertheless, several important differences emerged between the registered nurses and lab technicians. For example, only one of the five items rated among the top twelve in importance by the nurses is an intrinsic reward (opportunity to help others). For lab technicians, however, three of the five most important rewards are intrinsic (feeling of self-esteem, opportunity for personal growth and development, and self-fulfillment). Another difference occurred in the rewards that were ranked among the top twelve, both as most important and also as highly dissatisfying — the strong reinforcers. For nurses, all six items included on both lists were extrinsic rewards; for lab technicians, however, two intrinsic rewards (self-

EXHIBIT 3
PERFORMANCE-REWARD PAYOFF MATRIXES

REGISTERED NURSES

Importance	*Dissatisfaction* High	*Dissatisfaction* Low
High	*Priority 1* Self-Actualization Working Conditions Direct Economic Rewards	*Priority 2* Security
Low	*Priority 2* Indirect Economic Rewards Autonomy	*Priority 3* Esteem Social

LABORATORY TECHNICIANS

Importance	*Dissatisfaction* High	*Dissatisfaction* Low
High	*Priority 1* Self-Actualization Working Conditions	*Priority 2* Security
Low	*Priority 2* Direct Economic Rewards Indirect Economic Rewards Esteem	*Priority 3* Autonomy Social

Priority 1: Strong Reinforcer - High Potential Payoff
Priority 2: Moderate Reinforcer - Medium Potential Payoff
Priority 3: Weak Reinforcer - Low Potential Payoff

Source: Survey conducted by the authors.

TABLE 1
IMPORTANCE AND DISSATISFACTION MEANS FOR EACH REWARD ITEM
(Ranked in Order of Importance for Registered Nurses)

	Registered Nurses				*Laboratory Technicians*			
	Importance		*Dissatisfaction*		*Importance*		*Dissatisfaction*	
Reward Item	*Mean*	*Rank*	*Mean*	*Rank*	*Mean*	*Rank*	*Mean*	*Rank*
Sick or Absence Pay Benefits	6.63	1	4.63	1	6.17	11	4.44	1
Security	6.46	2	0.87	28	6.35	7	0.94	29
Cost of Living Adjustment	6.44	3	4.63	1	6.22	9	3.72	2
Opportunity to Help Others	6.43	4	1.29	22	5.94	16	1.00	28
Health Insurance Benefits	6.40	5	2.20	10	6.00	15	3.06	8
Opportunity for Personal Growth and Development	6.38	6	1.88	17	6.53	2	3.18	5
Salary/Wages	6.33	7	3.00	5	6.44	5	2.61	10
Feeling of Self-Esteem	6.31	8	1.06	24	6.67	1	1.50	21
Self-Fulfillment	6.29	9	1.93	13	6.50	4	2.50	11
Feeling of Worthwhile Accomplishment	6.21	10	1.93	13	6.22	9	1.83	20
Direct Pay	6.21	10	2.64	7	6.53	2	2.18	13
Working Conditions	6.13	12	2.80	6	6.33	8	2.17	14
Fringe Benefits	6.07	13	3.53	4	5.83	18	3.11	7
Holidays	6.06	14	1.63	19	5.56	24	1.44	22
Vacation Policy	6.00	15	1.47	21	6.11	12	2.06	18
Disability Insurance Benefits	5.94	16	2.38	8	5.72	19	2.17	14
Opportunity to Participate in Goal Setting	5.93	17	2.21	9	5.88	17	2.12	16
Opportunity for Independent Thought and Action	5.88	18	1.00	27	6.06	13	1.44	22
Incentive Plans	5.81	19	3.81	3	5.67	21	3.50	3
Educational Opportunities	[illegible]	20	2.06	12	6.41	6	3.47	4
Lunch, Rest and Break Time	5.65	21	1.19	23	5.61	23	0.78	30
Life Insurance Benefits	5.36	22	1.93	13	5.47	25	2.24	12
Authority in Position	5.25	23	1.06	24	5.06	28	1.18	27
Prestige Inside the Hospital	5.25	23	1.56	20	6.06	13	2.72	9
Retirement Benefits	5.20	25	1.93	13	4.59	30	3.18	5
Flexible Scheduling of Work Hours	5.19	26	1.75	18	5.33	26	1.28	25
Opportunity to Develop Friendships	4.93	27	0.14	31	5.28	27	0.33	31
Overtime Pay	4.33	28	0.20	30	5.65	22	1.94	19
Prestige Outside the Hospital	4.21	29	0.79	29	5.72	19	1.83	20
Shorter Work Week	3.50	30	1.06	24	4.44	29	1.41	24
Recreation Programs	3.00	31	2.19	11	3.22	31	1.28	25

Source: Survey conducted by the authors.

fulfillment and opportunity for personal growth and development) were included on both the importance and dissatisfaction top twelve lists.

Tables 2 and 3, which consolidate the thirty-one individual items into eight reward categories, show that both nurses and lab technicians rank security, self-actualization, and working conditions as most important; they are most dissatisfied with direct economic rewards, indirect economic rewards (fringe benefits), working conditions, and self-actualization.

In the order of importance of rewards, the nurses consider security to be the most important reward followed by self-actualization. One implication of this finding is that security may become a key labor relations issue if nurse shortages become less severe. Nurses see social, indirect economic rewards and esteem rewards as decidely less important. In terms of dissatisfaction nurses are least satisfied with direct economic rewards.

TABLE 2

IMPORTANCE AND DISSATISFACTION MEANS BY REWARD CATEGORY FOR REGISTERED NURSES

(Ranked in Order of Importance)

	Importance		*Dissatisfaction*	
Reward Category	*Mean*	*Rank*	*Mean*	*Rank*
Security	6.56	1	1.10	7
Self-Actualization	6.33	2	2.00	4
Working Conditions	6.00	3	2.60	2
Direct Economic Rewards	5.72	4	2.72	1
Autonomy	5.67	5	1.67	5
Social	5.55	6	0.55	8
Indirect Economic Rewards ...	5.39	7	2.26	3
Esteem	5.17	8	1.13	6

Source: Survey conducted by the authors.

TABLE 3

IMPORTANCE AND DISSATISFACTION MEANS BY REWARD CATEGORY FOR LABORATORY TECHNICIANS

(Ranked in Order of Importance)

	Importance		*Dissatisfaction*	
Reward Category	*Mean*	*Rank*	*Mean*	*Rank*
Self-Actualization	6.47	1	2.64	2
Working Conditions	6.47	1	2.33	4
Security	6.33	3	1.00	7
Direct Economic Rewards	6.15	4	2.99	1
Esteem	6.09	5	2.24	5
Autonomy	5.89	6	1.80	6
Social	5.60	7	0.83	8
Indirect Economic Rewards ...	5.43	8	2.45	3

Source: Survey conducted by the authors.

Lab technicians rated self-actualization and working conditions as significantly more important than all other rewards but security (see Table 3). In terms of dissatisfaction statistical tests revealed that direct economic rewards, self-actualization, indirect economic rewards, and working conditions are all significantly more dissatisfying than other rewards.

The only significant difference between the two employee groups with respect to reward importance was their evaluation of esteem. Lab technicians perceived esteem as significantly more important and were significantly more dissatisfied with it than were nurses.

The fact that the nurses and lab technicians in this hospital have reward preferences that are more similar than dissimilar may surprise those who view these employees as two rather different work groups. Accepting stereotype profiles may lead an administrator to assume erroneously that nurses are more motivated by intrinsic rewards and lab technicians more motivated by extrinsic rewards. More importantly, if a performance improvement strategy had been based upon that assumption, it probably would have failed to achieve desired results. The point is that managers cannot afford to assume what constitutes positive reinforcers for people. Instead, they must be willing to functionally define rewards so that they can use positive reinforcement to improve job performance.

DESIGNING SPECIFIC STRATEGIES

The information presented in Exhibit 3 indicates that performance-reward payoff strategies for nurses and lab technicians are quite similar overall. For nurses, self-actualization, working conditions, and direct economic rewards, if applied in conjunction with desired behaviors or results, stand the best chance of improving job performance. Indirect economic rewards, autonomy, and security have moderate potential; esteem and social rewards have low potential.

For lab technicians, self-actualization and working conditions are considered high potential reinforcers. Direct economic rewards, indirect economic rewards, esteem, and security have moderate potential; autonomy and social rewards have low potential. The primary differences between nurses and lab technicians are that esteem has greater potential as a positive reinforcer for lab technicians than for nurses; and autonomy has greater potential for nurses than for lab technicians.

Recommendations

One of the keys to improving the performance of employees is to know which items, from among a rather long list of candidates, have the greatest potential to perform as positive reinforcers. The primary purpose of this article is to illustrate a procedure for collecting and analyzing reward preference data, which can be used by management to design performance improvement programs, not only in the health services industry, but in other fields as well.

For administrators who may be interested in using positive reinforcement within their organization, a brief reminder is in order. When ranking rewards in their order of importance to individual employees or work groups, one should keep in mind that what constitutes a positive reinforcer for one person or group of employees may not serve to improve the performance of others. Some people will work only for money while others will improve performance for time off, for social recognition such as praise from a supervisor, or for feedback about job performance. Nevertheless, the results of many successful positive reinforcement programs indicate that some reinforcers have a very broad appeal. Feedback about job performance and verbal praise for a job well done are two such examples.

Given the information on reward category preferences for the nurses and lab technicians who participated in this study, health care managers might want to give serious consideration to feedback and praise. As shown in Exhibit 3, the intrinsic reward category of self-actualization proved to be a strong reinforcer for both employee groups. Feedback, or knowledge of results, has a very positive effect on those who are trying to use their capabilities to the fullest on the job. This is also true of high achievers who want to know on a timely basis how they are doing as they work toward the defined objectives. Nurses who rated autonomy as a Priority 2 reward category would also be expected to respond positively to feedback. Corrective feedback on a timely basis is considered a positive reinforcer by employees who want to be able to exercise a great deal of discretion and self-control on the job.

For lab technicians who rated esteem as a moderate reinforcer, praise from a supervisor for a job well done would be a preferred strategy. Praise, which is a form of social recognition, is very reinforcing to people who place a high value on esteem as a reward.

Managers who are dedicated to improving the quality and cost effectiveness of health care are strongly encouraged to use positive reinforcement strategies. They have been proven effective for improving productivity in people-intensive work situations. If managers can pinpoint productive job behaviors or results, define organizational rewards that reinforce desired levels of performance, and apply those rewards on a contingent basis, they can improve employee performance.

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[1] For a complete discussion of positive reinforcement and other behaviorally-based performance improvement strategies, the authors recommend Fred Luthans and Robert Kreitner, *Organizational Behavior Modification* (Scott, Foresman and Company, 1975).

[2] There is a technical difference between a "reward" and a "positive reinforcer." The primary distinction is that not all rewards turn out to be positive reinforcers. Rewards are subjectively defined, whereas positive reinforcers are functionally defined, which means they have demonstrated an ability to strengthen, or increase the frequency of, desired job behaviors. To illustrate the difference between the two, money is commonly thought of as an organizational reward. However, to qualify as a positive reinforcer, it must be able to strengthen a particular behavior or increase job performance when applied as a consequence of that behavior or level of performance.

[3] "Intrinsic Versus Extrinsic Rewards: Resolving the Controversy," *Human Resource Management*, Vol. 14, No. 2, pp. 2-9.

[4] Salary/wages and direct pay refer to the same reward item. They were both included in the questionnaire as an internal consistency check.

Potential Impact of the Arizona Health Care Cost Containment System

FRANK G. WILLIAMS

Arizona Senate Bill 1001, signed by the Governor November 18, 1981, created the Arizona Health Care Cost Containment System (AHCCCS, pronounced "access") to develop and administer a joint state and federal program for indigent health care. This legislation replaces state statutes that required the counties to respond to the health needs of the poor. AHCCCS is an experimental alternative to Medicaid for Arizona, the only state that does not participate in the federal Medicaid indigent health care program.

The specific features of AHCCCS are the result of negotiations between state, county and federal representatives. The program is of national interest because many policymakers see it as the way to administer Medicaid in other states. Matching federal funding is in the form of a three-year Medicaid demonstration grant. As one might expect, the requirements necessary to obtain the federal funds have implications for consumers, providers, employers and insurance carriers far beyond health care for the indigents.

AHCCCS is designed to meet two major goals. The state's immediate goal is to provide relief for the counties suffering from heavy financial burdens of indigent health care. While certain services and eligibility criteria were previously mandated for the counties, substantial differences existed in the type and scope of services available and in each county's financial ability to serve its needs.

The second goal is for AHCCCS to become a means to implement price competition and deregulation in the health care market in order to control costs. With a planned effective date of October 1, 1982, AHCCCS authorizes physician groups, hospitals, county health departments, insurance carriers and others to bid for contracts to provide health care to persons determined eligible. Rather than contracting for specific professional services, AHCCCS will operate on a prepaid per person basis somewhat similar to health maintenance organizations (HMOs). With certain exclusions, successful bidders will be responsible for meeting all the health care needs of their enrollees. It is hoped that price competition and cost control will be achieved as a result of the competitive bidding and because it will be physicians and hospitals who are at risk to provide all needed medical services in exchange for a fixed payment in advance. Thus, AHCCCS is really important as an experiment in price competition, since it would probably have been less expensive to have just funded county health departments directly, at least in the short run.

The Arizona Health Care Cost Containment System, which becomes effective on October 1, 1982, is intended to address both the problem of indigent health care in Arizona and the aspect of price competition in the health care industry.

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The price competition features of AHCCCS are significant to employers because the legislation already encourages expansion beyond indigents to include state, county, and private employees. For these persons, there will be no subsidy. While public agencies may submit bids, the legislative intent is that the private medical sector will serve at least some portion of the participating population. This article examines the potential impact of AHCCCS on health care price competition, reviews the details of the program, and discusses the potential impact on employee benefits.

POTENTIAL FOR PRICE COMPETITION

It has been suggested, in jest, that authors writing about health care adopt a universal symbol referring to a standarized introductory paragraph describing the rate and severity of current health care cost escalation. Use of the symbol would save time and relieve each author from having to state the problem ever more dramatically to catch the reader's attention. This suggestion, although meant to be sarcastic, reflects the frustration and failures associated with the many public and private attempts to restrain the growth of health care costs. When health care expenditures appeared to be approaching 8 percent of the country's total Gross National Product (GNP) several years ago, the experts claimed that a crisis was at hand. This led Victor Fuchs, a Stanford health economist to write in 1974,

> . . . a crisis is a turning point, a decisive or crucial point in time . . . at which the patient is on the verge of recovering or dying . . . (However) our "sick medical system" is neither to recover nor to pass away. Instead, the basic problems persist and are likely to persist for some time to come.[1]

For 1981, seven years after Fuchs' prognosis, the federal government reported that health care costs increased at a higher rate than for any other year since World War II, now exceeding 9 percent of GNP.

Past attempts to control health care costs have generally relied upon regulatory review of charges and limits on capital expansion. The apparent inability of government agencies to slow the rise in costs has resulted in major support for price competition and deregulation in the health care market.[2] Competition in health care has generally been on the basis of factors other than price. Physicians have competed for patients, and hospitals have competed for physicians by offering more and more costly, sophisticated services. This practice has been encouraged by health insurance which has lifted cost constraints from the consumer. The result is a health care system that has become competitive among providers attempting to offer the most and the best with no one directly responsible or in control of the resources expended. Absent have been the cost saving and efficiency incentives which result from competition in price.

Although price competition has not been a major factor in the health care market, there are some successful examples of its effect involving HMOs and alternative benefit packages. (See the article on page 21 of this issue of *Arizona Business.*) However, there have also been major, largely unsuccessful, progams for indigent health that were based on competitive models.[3] Thus, AHCCCS is truly experimental because it is not yet evident how, or even if, price competition can be successful in controlling the cost and distribution of health services.

Health Care Price Competition

Price competition can generally exist in two forms in a health care market. At one level, price is a major factor in the purchase of specific health care services, such as hospital patient days, physicians' services and laboratory tests. An example is the self-insured employer who seeks bids from health care organizations for providing the services estimated to be required by employees. A case manager can be used to assure that the quantity of services utilized is appropriate for the patient's condition. Typically, employees must pay the difference when they choose an alternative insurance plan that does not require the services to be from providers contracted by the employer. Competitive purchasing can also be appropriate for agencies responsible for indigent health care, for HMOs which must obtain some outside services, and even for insurance carriers when preferred providers may be designated.

The principal criticism of competitive purchasing is that it restricts the consumer's freedom of choice. The consumer must choose only among the providers whose bids were accepted. One alternative is to use deductibles and coinsurance rather than competitive bidding. This allows consumers to choose, while making them responsive to price. Unfortunately, consumers have limited knowledge of the price and quality of health care services and they often do not act rationally from the economist's perspective, at the time of need. Deductibles and coinsurance may also tend to discourage patients from seeking care until problems become serious and expensive to treat. Competitive bidding presumably allows employers and others to garner clout and expertise in order to be effective purchasers on behalf of employees.

The other way in which price can be a major factor is through competition among providers who themselves bear the risk of the quantity as well as the price of the services utilized, as will be the case with AHCCCS. In exchange for a prepayment, the health care organization agrees to meet all the enrollee's medical needs, usually with some exclusions, for a specified period. Revenues are thus based on the number enrolled. The provider has the incentive to reduce costs and utilization, and price competition assures that these savings are passed to the consumer.

As with price competition in general, prepayment has thus far been effective in restraining costs only in a limited number of circumstances,[3] in spite of the fact that most insurance coverage is prepaid and competitively priced. This is because private insurance companies have very limited control over the quantity, selection, or price of services used by their policyholders. Unless the insurer has some direct control of bargaining power with hospitals or physicians, cost containment activities encouraged by price competition can result only in reduction of administrative overhead. When the profit of insurance carriers is a function of premium volume, they actually have a disincentive to control health care costs up to the point where clients drop out of the market. Therefore, when one speaks of controlling costs through competition among alternative prepaid plans, there is clearly an assumption that the plans will either directly control services or obtain them in a price sensitive market.

Competitive Impact of AHCCCS

The design of AHCCCS can actually encourage health care price competition both among prepaid plans and among specific services. Competition among prepaid plans is encouraged because the legislation authorizes the Director of AHCCCS to contract with health care providers for hospital and physicians' services on per person basis. Price competition among specific services can also result from AHCCCS, since providers will likely not directly offer all services needed by their patients. Contractual limits on their revenues will give them strong incentives to seek competitive bids for the secondary services they would need.

In essence, the degree of both types of price competition that will be achieved depends on two major variables, market power and uncertainty of risk. Market power simply refers to the fact that the larger the number of patients and revenues involved, the more likely health care providers will be compelled to offer their services at competitively lower prices. In this regard, a significant feature of AHCCCS is that it is not just a program for indigents. The legislation mandates AHCCCS to be offered as a benefit option to all state employees. Additionally private businesses may participate in the plan. If AHCCCS becomes an attractive, lower cost option with a large number of nonindigent enrollees, hospitals and physicians will be forced to bid to protect their market shares. Thus, the likelihood of price competition being achieved in the health services market areas throughout the state will depend on the relative size of the indigent population, and more importantly in most areas, on the degree of participation by nonindigent eligible employees. As success is achieved, one can also assume that insurance carriers and major employers will join with AHCCCS in seeking services on a competitive bid basis.

In addition to the market power of AHCCCS, uncertainty of risk will also determine a provider's "willingness" to participate. As previously noted, prepayment requires providers to assume the risk for the amount of care needed by those enrolled. Unfortunately, in forecasting for bid preparation, providers cannot assume that past utilization rates for persons under the county systems will remain the same under the different incentives of AHCCCS. Potential providers are naturally concerned about assuming responsibility for the health needs of what is perceived to be a high risk population. Uncertainty has also been privately expressed that the presence of indigent persons will drive away physicians and other patients.

In order to limit risk and attract bidders, AHCCCS contains provisions for the state to reinsure catastrophic costs. That is, insurance will be available to hospitals and physicians to cover the excessive costs beyond a specified limit for the individual who suffers a catastrophic illness. However, this raises a larger concern expressed privately by potential providers. They fear that after responsibility for indigent health care is assumed, the government will rescind such features as catastrophic reinsurance and otherwise change the nature of the program. The involvement of government in AHCCCS seems to be the major cause of uncertainty as perceived by both providers and employers.

CHARACTERISTICS OF AHCCCS

The legislation authorizing AHCCCS concentrates on the methods for which health care is to be reimbursed, by whom and for whom.[5] Many of the significant details concerning how the program will operate have been left to the AHCCCS Director and administrator to develop based on citizen input and legislative review. This will allow for some flexibility as well as permit expansion of the program by the legislature as successes are achieved.

Administration

AHCCCS is a division of the Arizona Department of Health Services, managed at the assistant director level. However, most of the program's management is to be contracted to a separate administrator in the private sector. The administrator is not eligible to serve as a provider within AHCCCS.

As a result of competitive bidding the director of AHCCCS will award prepaid per person service contracts to qualified providers. AHCCCS allows bids from group disability insurers, hospital and medical service corporations, health care organizations and other appropriate public or private persons, including county-owned and operated facilities. If no acceptable bids are received for a particular area, traditional contracts may be awarded to reimburse providers up to 95 percent of customary fees.

AHCCCS enrollees are required to first visit a primary care physician who is part of an organization that has been awarded a state contract. The physician acts as a "gate keeper," controlling the referral of patients to hospitals and specialist physicians. This is in contrast to Medicaid in other states where eligibles may choose any authorized provider. To the extent practical, AHCCCS members are free to select among all contracted providers.

Eligibility

In other states, every person eligible for a federally aided public assistance program is also eligible for Medicaid. AHCCCS includes these persons and also specifies income criteria for eligibility determination for persons not federally qualified. Individuals must have annual incomes of less than $2,500 per year and a net worth of less than $30,000. Persons with incomes between $2,501 and $3,200 are also eligible as "medically needy", but they must pay coinsurance in an amount averaging 10 percent of the cost. The income base for both is increased by one-third for a spouse and 17 percent for each dependent. All AHCCCS members will be required to make a nominal copayment at each visit to discourage excess utilization. Counties have the responsibility to determine who is eligible for AHCCCS, estimated to be more than 200,000 persons in Arizona in the first year.

It should be mentioned that AHCCCS will not do away with county health care. At Maricopa County General Hospital, for example, about half of the outpatient visits and nearly one-third of hospitalizations are currently for persons who would not be eligible under AHCCCS, according to preliminary data. Since medical expenses can be deducted to determine net income for eligibility, these persons will likely be forced to spend their resources until they become eligible for AHCCCS. Indigent persons 65 and older will remain the responsibility of the counties and Medicare.

Benefits

AHCCCS will cover the usual array of medical services including physicians, hospitals, laboratories, pharmacies, and emergency care. Excluded are such services as long-term care, nonemergency dental care, eye glasses, hearing aids, outpatient mental health services, home health care and family planning. Excluded services will remain the responsibility of the counties, which are prohibited from reducing their benefit levels while AHCCCS is in effect.

Financing

The AHCCCS program is estimated to cost $106 million the first year: county share, $58 million; federal match, $28 million; and state approximately $20 million. This does not include funds from participating, nonindigent employees. Since federal funds will be provided on a prepaid basis, the state will be at risk for cost effective provision of services. Each county's contribution is equal to 40 percent (first year) of their 1980-81 indigent health care budget.

POTENTIAL IMPACT ON EMPLOYEE BENEFITS

It appears that AHCCCS has the potential to affect employee benefits directly in three major ways in addition to encouraging the development of more competitive prepaid alternatives. First, it may stimulate employers or their insurance carriers to become more aggressive as purchasers of employee health services. Second, it may encourage more employers to provide medical services directly. Finally, it may result in employers and employees paying greater costs to support indigent health care. At this point, the extent to which these possibilities are likely to occur is not clear.

Employers as Purchasers

The historical absence of price competition in the market for health services has forced major purchasers to adopt a strategy that incorporates support for regulation combined with a variety of efforts to promote health, monitor benefit payments and otherwise discourage utilization.[6] This has been done in the face of a hospital industry that is becoming increasingly sophisticated in coping with government and marketing new programs to stimulate demand. Recognizing the need to control the price as well as the volume of services used by employees and their families, the U.S. Chamber of Commerce embarked on a national campaign in 1978 to encourage businesses to support "alternative delivery systems" such as HMOs, as well as increase their involvement in the regulatory arena.[7] AHCCCS, of course, calls for similar support from businesses, although some believe that competition will soon eliminate the need for regulation.

Currently there is also a great deal of interest in businesses forming coalitions to unify their efforts in "developing utilization data bases, education, planning, alternate delivery systems and health promotion."[8] The question now is whether large firms will go one step further, eliminate the "middleman" and purchase health care services directly.

There are instances within the industry of certain employers, HMOs and insurers obtaining discounted rates for care. Medicare nationally and Blue Cross in many states (not Arizona) have contractual agreements that allow them to pay less than total charges. However, these arrangements have tended to result in the discounted costs being shifted to other, less fortunate payers. Based on the less than overwhelming "involvement" of businesses to date in health care cost containment, one must be skeptical as to whether a sufficient number of firms will become vigorous as purchasers, refusing to accept cost shifts in order to develop a truly price competitive market.

The reluctance of firms to pursue an aggressive role in health care is often not understood by those seeking to control health care costs. Benefit managers must balance their desires to push for health care efficiency and cost containment with the right of their employees to choose health care freely.[9] It is not clear to employers why it is appropriate for them to accept the responsibility and liability in selecting personal health services for their employees. With regard to the new movement toward coalitions, it is also not surprising that,

> rhetoric aside, evidence does not support the idea that business coalitions are in a mature or monolithic phase of development. More to the point is the notion that many fragments of activity may now have the potential to coalesce into a major movement if initial feelings of distrust and hostility can be overcome.[10]

It is important to put general employer interest in health care in proper perspective. Only a modest concern for costs was found among the directors of major corporations interviewed in a 1979 study.[11] The executives felt they could not control health care expenses, that employees would fight to keep their nontaxable benefits, and they had bigger problems to worry about anyway. The study concluded,

> doing absolutely everything it is advised to do to control health care costs, a company might be able to save 0.1 percent of total expenditures if it is fortunate. The equivalent managerial energy expended on activities more central to the business is almost always seen as more productive and certainly as less disruptive of corporate routines.[12]

As previously discussed, AHCCCS may encourage creation of a number of prepaid provider plans which will likely in turn force more price competition for specific health services. Some employers can be expected to become direct purchasers of health care also, but most cannot be expected to be aggressive in developing this market. Initiatives for market change will probably have to come through AHCCCS.

Employers as Providers

Legislation has been passed in Arizona to phase out health planning and rate regulations. This was not supported by many employers who expressed the view that these less-than-ideal government controls should have remained in effect until it is shown that price competition will contain costs. Furthermore, rather than dependence upon stricter controls if competition fails, some people support actual acquisition of health care facilities.[13]

Of course, employer ownership of health care facilities is not new. Kaiser Industries operated clinics in World War II and Arizonans are familiar with hospitals built and managed by mining companies. However, employers have generally provided health care only in areas where it was not available in the private sector. Today, escalating costs, changing attitudes, and surpluses of physicians are at least encouraging discussion of applying "make vs. buy" criteria to employee health services. This is not to say that if AHCCCS is less than successful, companies will rush out to buy hospitals. Yet, there is a trend toward organizations providing more of their own programs for health promotion, alcoholism, stress and so forth as alternatives to expanded benefit packages. Instead of just continuing to purchase insurance, employers in the future can be expected to pursue a number of options including the direct purchase or even provision of at least some employee health services. In addition to stimulating the development of these alternatives, AHCCCS cannot help but increase their awareness and support by employers.

Cost Shift

Earlier it was noted that costs not fully paid by Medicare and Blue Cross were shifted to others, namely the private payor and those with the types of insurance most purchased by industry. From the employer's perspective this situation has the potential of becoming much worse if indigent health care is reimbursed at less than total cost. Other prepaid providers, encouraged by AHCCCS, will also seek discounts from hospitals and others from whom they must subcontract for services. In the long run, sufficient competitive forces can develop where no one is the victim of a cost shift. In the meantime, however, the incentive will be for health care institutions to shift their unmet AHCCCS costs to payors who do not bid for services. Businesses must recognize the tremendous pressures on government agencies to limit what for them is a major part of their total expenses. Industry leaders must be active in encouraging AHCCCS to pay its share, and they must be aggressive purchasers themselves in the health care market. Cost shift may well become the major motivator in AHCCCS that will ultimately bring about price competition.

CONCLUSION

A great deal of writing and discussion has emerged in recent years about the advantages of deregulating health care in order to stimulate price competition. Beginning with the indigents, AHCCCS provides a major opportunity to translate these words into results. Faculty at Arizona State University and the University of Arizona have formed a working team to study this "Arizona Experiment." Several proposals have already been developed to evaluate the impact on patients, costs, employers health care organizations and physicians. This research and the efforts of others should be of assistance in directing the program. As House Majority Leader Burton Barr said recently, "With AHCCCS we are like Columbus. We don't know exactly where we are headed, and we don't know what we will find when we get there."[14] AHCCCS can cause many changes in health care, both good and bad. It is the responsibility of all major players — government, hospitals, physicians, citizen's groups, labor and employers — to look beyond just protecting their own interests. They must adopt a commitment to improving AHCCCS and giving it a fair chance if it is to succeed.

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[1] Victor R. Fuchs. *Who Shall Live? Health, Economics and Social Choice* (New York: Basic Books, 1974) p. 9.

[2] "RX: Competition," *Business Week*, February 8, 1982, pp. 58-62, 64.

[3] See, for example, Carol N. D'Onofrio, and Patricia Dolan Mullen "Consumer Problems with Prepaid Health Plans in California," *Public Health Reports*. 2 (March-April, 1977): 132-3.

[4] Harold S. Luft "HMO's and the Medicaid Care Market," in *Socioeconomic Issues of Health, 1980* (Chicago: American Medical Association, 1980), p. 95.

[5] Senate Bill 1001, State of Arizona, Thirty-Fifth Legislature, 1981.

[6] For a discussion of potential business alternatives to control cost see K. Per Larson, "Taking Action to Control Health Care Costs," *Personnel Journal*, Part I (August, 1980), pp. 640-644, 675, and Part II (September, 1980), pp. 735-739. See also *Business Insurance*, December 15, 1980.

[7] National Chamber Foundation, "How Business Interacts with the Health Care System," *A National Health Care Strategy*. Washington, D.C.: National Chamber Foundation, 1978, p. viii.

[8] Carol Keenan, "Boon or Bane, Business Coalitions Have Entered the Health Care Scene," *Hospitals*. 56 (February 1, 1982): 65.

[9] Richard D. Wood, "An Employer's View of Health Policy," *Hospital Financial Management*, (July, 1980) p. 34.

[10] Keenan, "Business Coalitions," p. 64.

[11] Harvey M. Sapolsky, *et al.* "Corporate Attitudes towards Health Care Costs", *Milbank Memorial Fund Quarterly/Health and Society*, 59, (Fall, 1981): 581-2.

[12] *Ibid.*, p. 582.

[13] Kenan E. Sabin, and Amy K. Tayler, "Employer Acquisition of Health Care Facilities: A Possible Outcome of Escalating Premiums," *Sloan Management Review*, (Summer, 1979) p. 61.

[14] Burton Barr, speech, "Health Care: What's Right for America," St. Joseph's Hospital and Medical Center, November 13, 1981

The HMO: A Health Care Alternative

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For a growing number of Arizona residents, the health maintenance organization (HMO) is becoming a viable alternative to traditional fee-for-service medical care. Currently, several HMOs operate in Arizona's two major metropolitan areas, where they serve over 200,000 people. Recent state legislation in the area of price competition and indigent health care coupled with a number of organizational changes within the state's existing HMO structure should have a positive impact on HMO development. Unfortunately, however, many Arizonans know little about HMOs and often are unaware of the availability of HMOs in their local areas. To provide insight into this growing area of health care, this article discusses the health maintenance organization as an alternative to fee-for-service medicine and analyzes the HMO as a means of combating increases in the cost of health care delivery.

HISTORICAL DEVELOPMENT OF THE HMO

Health maintenance organizations have existed in the United States since the late 1920s under varied nomenclature ranging from prepaid group practices to individual practice associations. One of the earliest and most successful plans was founded in 1938 by Kaiser Industries during the construction of the Grand Coulee Dam. Concerned and dissatisfied with the available fee-for-service medical care, Henry J. Kaiser sought an alternate method of employee health protection. As a solution to the problem, he engaged a group of physicians, on a prepaid basis, to provide basic care to all Kaiser dam workers at Grand Coulee. Today, that venture is known as the Kaiser Permanente Plan. As the country's largest HMO, it now serves more than three million persons in six states.

Health maintenance organizations (HMOs) provide a comprehensive health care package to members for a level monthly premium. As a competitive force, they can serve to stimulate cost containment in the health care industry.

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The Kaiser Plan, of course, is a separate and unique HMO. With the exception of this plan, HMOs attracted only a small following throughout most of their early history. In fact, the real development of HMOs did not occur until after the passage of the Health Maintenance Organization Act of 1973 and its amendments in 1976.[1] Currently, the HMO movement is represented by over 240 prepaid medical plans serving approximately ten million people throughout the United States.[2] With about 4 percent of the U.S. population in 1981, HMO membership is projected to increase to over twenty million persons during the 1980s.[3]

The HMO Concept

Health maintenance organizations provide an alternative form of health care delivery through an organized system of health care services for individuals or families under a voluntary prepayment plan offered by employers. As a prepaid health plan, the HMO premium is based on a employer-negotiated contract between a group of employees and a group of physicians. Enrollees agree to pay a predetermined monthly rate that remains constant over the contract period — normally a term of one year. In return, the physicians promise to provide comprehensive quality health care as required by members of the employee group. Thus, the essential ingredients of an HMO are as follows:

- Membership is totally voluntary, and employees may freely choose between traditional fee-for-service medicine covered by conventional health insurance (indemnity plan) or an HMO.
- Under the HMO concept, a comprehensive package of health services is offered to members. This package includes physician services as well as hospital care and related contracted health services such as prenatal care, immunization programs, basic dental care, and a wide array of health education programs.
- Members prepay a level, monthly premium without regard to the number of physician visits or amount of care required. Under some plans, a nominal fee of two or three dollars is charged for office visits and other services such as eye examinations, dental cleaning, and home visits.
- All medical services are provided by the HMO physicians or selected consulting physicians in facilities designated by the HMO.
- When members do not use the HMO's physician and designated facilities, reimbursement for services normally is denied. Exceptions to this general rule apply when the member is out of the service area or when medical emergencies arise.

The Basic HMO Models

The Health Maintenance Organization Act of 1973 provides for three basic HMO models:[4] (1) the Group Practice Model, (2) the Staff Model, and (3) the Individual Practice Association (IPA) Model. Although each is an HMO, they differ significantly in the contractual relationships among the participating parties. This section presents a brief review of each and a summary of their principal advantages.

The *Group Practice Model* consists of a group, or a number of groups, of physicians in a common practice. The group shares facilities, personnel, equipment, and records. The HMO contracts with the physicians' group and with area hospitals. Individual physicians in the group work for the HMO for a specified annualized salary. Nonhospital-related medical care is provided in one or more health centers conveniently located in the service area covered by the HMO.

Operationally, the Group Practice Model offers emergency services around the clock and personalized care with a choice of physicians within the group through regular appointment schedules during normal office hours. Hospital care is provided in plan-participating hospitals. Specialized services, not offered by the group or its facilities, are secured from designated consulting physicians and through selected outside support facilities.

The *Staff Model* is similar to the group practice HMO except that the staff model HMO directly employs a salaried staff of physicians and providers of medical care. There is no contract with a medical group, and each physician is an individual employee of the HMO. Hospital care and specialized services are provided by the staff model HMO and the group practice HMO in exactly the same way.

The *Individual Practice Association (IPA) Model* is a third form of HMO in which the physicians practice in their own offices and maintain a portion of their time for their private practices. An IPA HMO physician receives a fee for services performed, but that fee is paid by the IPA HMO under the terms of a contractual agreement with the physician. The relationship with members in this form of HMO is no different than the relationship that exists in the other two forms. Medical care is prepaid, and there are no additional costs to the member beyond the nominal two or three dollar visit fee. The key distinction, therefore, is in the method of payment to the physician and the proportion of time contracted to the HMO in addition to the amount of private practice conducted by the physician.

Both the group practice model and the staff model HMOs provide for one-stop health care, good coordination, and the utilization of common facilities. On the other hand, the IPA HMO provides for a wider choice of physicians and more convenient location of health services.

TRADITIONAL MEDICAL SERVICES

Fee-for Service Medicine

In contrast to the HMO, traditional medical service is based on a fee-for-service system wherein patients seek medical care through private physicians who direct that care while utilizing the additional services of consulting physicians, laboratories, clinics, and hospitals

Upon receiving care, the patient is required to pay for services to each provider on a specified fee basis.

The most widely used method of payment in fee-for-service medicine is payment through health insurance. Since the insured patient seldom pays the bills directly, this third party system has tended to soften consumer resistance to price increases in health care.

According to the U.S. Department of Health, Education, and Welfare (HEW), medical spending in 1965 totaled $39 billion, or $198 per person. By 1978, it was estimated that these expenditures increased to $182 billion, or $832 per person. Whereas health care costs were 5.9 percent of gross national product (GNP) in 1965, they rose to 8.9 percent in 1978. During that period, medical payments through insurance companies grew from approximately 44 percent to almost 70 percent of personal health expenditures and from 81 percent to over 90 percent of hospital expenditures.[5]

The HMO as a Competitive Force

In an effort to introduce more competitive market forces into the health care industry, the federal government and many leading corporations have supported the HMO concept as an alternative to traditional fee-for-service medicine. Although there has been a belief that the existence of an HMO in a given market can lower health care costs, strong empirical evidence to support this belief has been limited due to the relatively slow growth in the HMO movement. With the increase in the number of operating HMOs that has occurred in recent years, however, there is a growing base of information to substantiate the view that HMO presence in the market may help lower costs for both subscribers and nonsubscribers when a more competitive environment is created. A study conducted for the Federal Trade Commission, for example, concluded that:

> . . . there have often been competitive responses to HMOs especially where HMOs have obtained significant market shares...The main types of competitive reaction have included creation of new HMOs, creation of individual practice associations and medical care foundations, increased benefit packages, and more effective cost control efforts.[6]

In another example of what market forces can accomplish, *Fortune* magazine published an article that provides some evidence of the impact of HMOs in a local market area. Using the twin cities of Minneapolis-St. Paul as a case study, the article discusses what can happen in health care delivery when the HMO concept is accepted as a viable alternative to fee-for-service medicine.[7]

In the Twin Cities, the number of HMO enrollees increased from 2 percent to almost 12 percent of the area's 1.9 million population in just over seven years. Encouraged and supported by the area's major employers, this rate of market acceptance produced intense competition and an element of price warfare among health care providers. Today, a total of eight HMOs are rivaling each other and conventional health insurance plans for a share of the market, and most of the area's physicians are now associated with the HMO movement.

Because of a success formula that has provided most of the HMOs with a profitable position, they have required smaller rate increases than those charged by conventional insurers. The largest HMO, for example, planned for a 12 percent increase over a two-year period that began in 1978. This type of pricing strategy has forced conventional insurers to monitor waste carefully — especially excessive hospitalization — in an effort to remain competitive. Cries of "underpricing" and "cutthroat competition," terms unheard of in the medical community, are now commonplace as rivals vie for market position.

Twin Cities HMOs contend that their highly competitive environment has forced competitors to respond to market demand for an improvement in the quality of care. Thus, instead of requiring members to use a limited number of large clinics, local HMOs have covered the area with a total of forty-nine clinics and branches. In addition, they have kept costs down by trying to eliminate incompetent physicians. Furthermore, through a program called "compliance," the HMOs have attempted to speed recovery and reduce costs by telephoning patients to insure that they are following prescribed medications and physicians' treatment plans.

An indication of the growing popularity of the HMOs in the Minneapolis-St. Paul market is revealed in the proportion of enrollees among employees of the area's major employers. At Honeywell, for example, a new plan, supported by a strong educational program, was offered to the company's 15,000 workers in 1978. From this effort, Honeywell was successful in getting a total of 31 percent of its employees to switch from conventional health insurance to HMO coverage. At Control Data, approximately 30 percent of their Twin-Cities' employees changed over in a period of one year. General Mills, a supporter of HMOs for more than five years, has enrolled over 60 percent of its employees. If the HMOs begin signing large numbers of Medicare and

Medicaid patients, some local experts predict that total enrollment may approach 50 percent of the market in the not so distant future.

HMOs IN ARIZONA

As demonstrated by the acceptance rate of HMOs in the Minneapolis-St. Paul market area, HMOs provide an important element of consumer choice in the health care delivery system. Where choices are available, there is an indication that HMOs fare reasonably well. Such is now the case in Arizona where HMO operations serve the state's two primary markets in Phoenix and Tucson.

Although no published data are available, HMO providers in both Phoenix and Tucson believe that they have attained a market share approaching 10 percent. This means that roughly 150,000 persons in Maricopa County receive their medical care through HMOs, while another 50,000 are attended by HMOs in Pima County. At the present time, no other HMO organizations have been established to serve the smaller market areas in the state. Those in the two primary markets, however, do feel that their acceptance rate is increasing and that HMOs now are a solid and viable alternative in the health care delivery system in the State of Arizona.

The HMOs in Phoenix and Tucson function as some variation of either the group practice or staff models. To date, no pure form of the IPA model has been established in the state. Published reports, however, do indicate that there is a growing interest in the formation of an IPA HMO in the Phoenix market.[8] Supporters of the IPA believe that Phoenix is a good HMO market and that a new IPA model will significantly increase the acceptance rate as physicians and hospitals begin to participate in such a program. They cite the success story in Minneapolis-St. Paul as evidence of what can be achieved when a very large percentage of the private physicians belong to an IPA.

Although the future contains many unknowns, there is evidence that the health maintenance organization is a viable alternative to traditional fee-for-service medicine. If quality services are offered at competitive prices, consumers will enroll in an HMO plan. In new market areas, growth may be very slow for a period of time, but it will gain momentum with each increase in enrollments. This clearly appears to be the case in Arizona, where HMOs enjoyed a modest growth in early years but a significant upward trend since the passage of the HMO Act of 1976.

While the HMO system of health care delivery is not the answer for every Arizona resident, it is a viable alternative for those who wish to purchase a comprehensive health care package at a level and known cost per month. Further, it is viable for those who do not have strong individual physician preferences. Finally, it is viable for those who wish to have an alternative to traditional fee-for-service medical care.

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[1] Health Maintenance Organization Act of 1973 (P. L. No. 93-222) and Amendments to the Health Maintenance Organization Act (P. L. No. 94-460).

[2] *National HMO Census*, June 30, 1981, InterStudy, Excelsior, Minnesota.

[3] Mary Alice Krill and Ralph R. Gayner, "What is the Future of Prepaid Medical Practice?," *Medical Group Management*, January-February, 1982, pp. 42-47.

[4] Health Maintenance Organization Act.

[5] Health Insurance Institute, United States Department of Health, Education and Welfare.

[6] Lawrence G. Goldberg and Warren Greenberg, *The Health Maintenance Organization and Its Effects on Competition*, Staff Report to the Federal Trade Commission, July 1977, p. 117.

[7] Edmund Faltermayer, "Where Doctors Scramble for Patients' Dollars," *Fortune*, November 6, 1978, pp. 114-120.

[8] "Physicians Group Offers Health Care on Pre-Paid Basis," *The Arizona Republic*, February 6, 1980, and "New Health Care Plan Offers an Alternative," *Scottsdale Daily Progress*, March 14, 1980.

The Arizona Business Scene

The Health Services Industry in Arizona

The health services industry is a growing sector in Arizona that comprises a number of different services: physicians, dentists, other health practitioners such as optometrists, nursing and personal care facilities, hospitals, medical and dental laboratories, outpatient care facilities, and miscellaneous other services. The growth of this industry in Arizona in recent years has exceeded the rate of the state's population growth. Thus, the per capita demand for health care in Arizona is increasing, due partially to the continued influx of retirement age individuals and others with health problems. However, both in Arizona and across the country, the demand for health services by the general population is also increasing, in part due to improved medical technology.

One means of measuring the growth in health services is by employment in the industry. In Arizona the health services industry employed approximately 56,900 people in 1981—5.5 percent of the total wage and salary employment. Since 1972, health services employment has grown 89 percent, compared to an increase in all wage and salary employment of 60.9 percent and a population increase of 42.8 percent. The majority of health services employment (approximately two-thirds) is in Maricopa County, where the rate of employment growth has been even faster than the statewide average, more than doubling since 1972. In 1981, 38,100 people worked at 2,554 health services establishments in Maricopa County.

The number of nongovernmental health services employees throughout Arizona is summarized in Table 1. The vast majority (nearly 90 percent) of health care facilities and employment in Arizona are in the two urbanized areas of Maricopa County and Pima County. In each of the twelve nonmetropolitan counties, the county's share of health services employment and establishments is proportionately less than its share of the

TABLE 1

ARIZONA HEALTH SERVICES EMPLOYMENT AND ESTABLISHMENTS BY COUNTY, 1980

	Number of Employees[1]	*Number of Establishments*
ARIZONA	51,983	3,823
Apache	261	11
Cochise	582	65
Coconino	861	100
Gila	310	27
Graham	323	12
Greenlee	12	4
Maricopa	34,643	2,489
Mohave	626	63
Navajo	371	40
Pima	11,884	769
Pinal	428	53
Santa Cruz	163	13
Yavapai	991	95
Yuma	528	82

[1] Excludes government employees and self-employed. The major government health service employers are the Veteran's Administration and the Indian Health Service.

Source: County Business Patterns 1980—Arizona, U.S. Department of Commerce, Bureau of Census.

state's population. Thus, residents in these counties frequently go to the Phoenix and Tucson areas for their health care needs.

Table 2 summarizes nongovernmental employment and establishments in the various fields of health services. Hospitals employ over half of the state's total health services personnel, although the number of hospital establishments is less than 2 percent of the state's total health services establishments. Nine of the hospital establishments have over 1,000 employees each. Physicians' offices make up nearly half of the total number of establishments but employ only 17 percent of the total personnel.

TABLE 2

ARIZONA HEALTH SERVICES EMPLOYMENT AND ESTABLISHMENTS

1980

	Number of Employees[1]	*Number of Establishments*
TOTAL	51,983	3,823
Offices of Physicians	8,800	1,800
Offices of Dentists	4,260	923
Offices of Other Health Practitioners[2]	2,032	605
Nursing and Personal Care Facilities	4,760	67
Hospitals	26,625	56
Medical and Dental Laboratories	1,591	175
Outpatient Care Facilities	2,613	138
Other	1,239	32

[1] Excludes government employees and self-employed.

[2] Includes osteopathic physicians, chiropractors, optometrists, etc.

Source: County Business Patterns 1980—Arizona. U.S. Department of Commerce, Bureau of Census.

The total nongovernmental payroll in health services in 1980 was $754.6 million. Although hospitals employ 51 percent of all health services personnel, their payroll is only 43 percent of the state total. In contrast, physicians' offices employ only 17 percent of the industry's personnel, but their payroll is 32 percent of the total. Explanations for these relationships include the varying mix of employees (e.g., physicians vs. orderlies) and the varying use of part-time employees in the different fields of health services.

A large proportion of the people who work in the health services industry are licensed professionals; the number of licensed health professionals in Arizona in the first quarter of 1982 is summarized in Table 3. Of the total 42,659 licensed professionals, some are unemployed and others are working at jobs outside of the health care area. For example, of the nearly 26,000 nurses, slightly fewer than 20,000 were employed in nursing, and only 14,000 were full-time employees. Arizona has 157 licensed health professionals for every 10,000 persons and 33 doctors for every 10,000 persons.

TABLE 3

LICENSED HEALTH PROFESSIONALS ARIZONA, 1982

	Number
Total Doctors	8,958
Medical Doctors	4,886
Osteopathic Doctors	525
Chiropractic Doctors	600
Naturopathic Doctors	150
Psychologists	808
Dentists	1,415
Podiatrists	139
Optometrists	435
Total Nurses	25,920
Registered Nurses	19,890
Licensed Practical Nurses	6,030
Total Other	7,781
Physicians' Assistants	132
Paramedics	399
Emergency Medical Technicians	250
X-Ray Technicians	7,000
TOTAL	42,659

Source: Survey of the respective state licensing boards for the various professions by the Bureau of Business and Economic Research. These figures do *not* include employees of the Veteran's Administration or the Indian Health Service.

Hospitals comprise a large portion of the health services industry, as indicated in Table 2. Three hospital administrative units operate in Arizona: state licensed hospitals, Veterans Administration hospitals, and Indian Health Service facilities. The state licensed facilities have a total of 10,851 beds in 68 facilities, which accommodated 368,212 patient admissions in 1981. Patient revenues of $1.27 billion in 1981 illustrate the magnitude of the health services industry. Governmental facilities add still more to these figures. For example three Veterans Administration hospitals serve Arizona with 1,012 beds operating on an annual budget of $92.6 million.

A current issue in health care is the increasing cost of goods and services. Although medical care price increases in the last five years have been substantial, these increases have been less than the overall increase in inflation. In the Metropolitan Phoenix Consumer Price Index, the All Items rate of inflation from 1977-1981 was 74.4 percent while the increase in the major category of Medical Care was 63.8 percent. In each of the past five years, the annual increase in Medical Care has been less than the overall inflation rate.

Within the category of Medical Care, however, the inflation rates for subcategories have varied widely. The cost increases in hospital and related services have been the largest of any subcategory at 89.3 percent over the last five years. The charge for a hospital room has increased 82.1 percent, with rapid increases in the last two years: 18.9 percent in 1980 and 17.3 percent in 1981. In contrast, physicians' fees have increased only 5.9 percent and 3.4 percent in the last two years. In 1979, however, these fees increased 25.4 percent. Dental fees also increased only slightly in 1981 (3.5 percent), but the increase in each of the two previous years was 23.2 percent. Thus, although certain medical care categories have had rapid price increases in particular years, the overall category of Medical Care has had comparatively small increases in the last five years.

ARIZONA SALES OF ELECTRICAL POWER

	March 1982	*March 1981*	*One Year Percentage Change*	*March 1982*	*Feb. 1982*	*One Month Percentage Change*
Sales of Kilowatt Hours (Thousands)	2337.0	2413.9	-3.2	2337.0	2095.5	+11.5
	April 1982	*April 1981*	*One Year Percentage Change*	*April 1982*	*March 1982*	*One Month Percentage Change*
Sales of Kilowatt Hours (Thousands)	2298.8	2470.1	6.9	2298.8	2337.0	-1.6

A Survey of Arizona Business Conditions

HAROLD FEARON

APRIL

The Arizona economy slid downhill through all of April on a toboggan ride that began early in 1981 and has picked up considerable speed over the past four months. The monthly business survey of the Purchasing Management Association of Arizona and the Purchasing Management Association of Southern Arizona shows that all indicators of economic activity were negative in April. The only good news is that prices declined for the first time in almost seven years.

The purchasing business survey is in its twentieth year of consecutive monthly reporting on the current status of the Arizona economy. Data are gathered through a questionnaire sent at the close of each month to purchasing managers throughout the state, asking them to indicate the direction of activity—higher, unchanged, or lower—on six key indicators of economic activity in the month just ended. Since these purchasing managers deal daily with the forces of supply and demand, they are able to provide timely and accurate information on current business trends, which enables economic turning points to be spotted.

Prices paid for major purchased items actually fell in April. Although the decline was minor, it was the first monthly decrease since May, 1975—nearly seven years ago. Higher prices were reported by 19 percent of the purchasing managers; 60 percent said prices were unchanged; and 21 percent said their firm paid lower prices in April than in March, an unusually high proportion. This is the second month in a row of essentially stable prices, showing that the inflationary pressures of the past seven years are gone, at least temporarily.

Delivery time on shipments from vendors continued to contract, and at a greater rate than in March, as excess capacity in the economy continues to grow. Fifteen percent of the firms reported it took longer to get delivery from vendors in April, but almost twice as many — 27 percent— said they got faster deliveries.

Inventory levels of purchased materials fell again, as firms attempt to bring stocks in line with their lower levels of production and sales, although the April decrease was slightly less than in March. Higher inventories were reported by only 18 percent of the firms, while a very high proportion (44 percent) cut stocks. Large reductions in inventory have been made over the past ten months, which should set the stage for reasonable growth once the economy begins to turn up again.

New orders received from customers fell again, and at the same rate of decrease as in the previous month. This was the ninth consecutive monthly drop. Twenty-six percent of the Arizona firms reported an increase in new orders, but 47 percent said they booked less new business in April than in March. One indication of the current deterioration in the economy is that the March and April new-order declines were substantially larger than in January and February.

Arizona firms cut their production substantially in April—the largest decrease since last December. Higher production was reported by 22 percent of the firms, but

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twice that proportion—43 percent—reduced output. The new-order declines indicate that production will drop still further over the months immediately ahead.

Employment is very weak and continued to fall, at a rate about half again as large as in March. This was the eleventh month in a row of lower employment, and April saw the largest decrease since February of 1975—more than seven years ago. Only 9 percent added to their work force, compared to a sizable 42 percent who pared payrolls.

Evidently the low point in the current recession still has not been reached, and further declines are likely as summer begins. The July tax cut and the scheduled boost in Social Security benefits will provide new thrust to the economy, but it is unlikely that any vigorous recovery will be underway before well into the third quarter. Yet, the stable price picture puts the economy in a position where governmental action to reduce interest rates, which will unleash a large pent-up demand for autos, housing, and appliances, now can be taken without any severe danger of causing the inflationary spiral to start up again.

The results of the April purchasing survey are shown in Table 1.

TABLE 1

APRIL PURCHASING SURVEY

	Percent of Purchasing Managers Indicating Each Response (April compared to March)		
Key Indicators	*Higher*	*Same*	*Lower*
Prices paid for major commodities	19	60	21
Delivery time from vendors	15	58	27
Purchased materials inventory level	18	38	44
New orders received	26	27	47
Production	22	35	43
Employment	9	49	42

Source: Purchasing Management Association of Arizona and the Purchasing Management Association of Southern Arizona.

MAY

The Arizona economy continued to deteriorate in May, although the rate of decline moderated somewhat, according to the monthly business survey of the Purchasing Management Association of Arizona and the Purchasing Management Association of Southern Arizona. While all indicators of economic activity again were negative, two of the indicators (delivery time on shipments from vendors and new orders received) registered declines that were much less steep than in the previous month. The bottom of the current recession has not yet been reached, but it probably now is close. The pace of inflation continues to moderate, and prices have been stable for the past three months.

Prices paid for major purchased items were unchanged in May for the third consecutive month, showing that inflationary pressures have been eliminated, at least temporarily. Higher prices were reported by 21 percent of the purchasing managers; 59 percent said prices were unchanged; but 20 percent said they paid lower prices in May than in April. Arizona is likely to see constant prices for the next several months. Price stability was a long time arriving, but it now is an encouraging sign favoring the resumption of more stable economic growth once the turnaround occurs.

Delivery time on shipments from vendors saw only a slight stretchout in May — only about a fourth of the rate in April and the smallest in the past six months. Eighteen percent of the firms said it took longer to get deliveries in May, compared to an almost equal 21 percent who received faster service. This likely is an early indication that the downswing is bottoming out.

Inventory levels of purchased items dropped dramatically, with a very large 50 percent of firms cutting stocks and only 15 percent adding to inventory. This was the largest one-month inventory reduction since June, 1975. Arizona firms are taking positive action to bring stocks in line with order receipts and production. This obviously creates an additional drag on the economy, but when these inventory reductions are completed, the economy should be well positioned for a resumption of growth.

New orders received from customers dropped again, for the tenth consecutive month. Thirty-three percent of the Arizona firms reported an increase in new orders, compared to 41 percent who said they booked less new business in May than in April. While this shows a continued deterioration in the economy, it was the smallest one month order rate drop since last September and the rate of decline was only about one-third as great as in April. The low point in new order receipts probably will be reached in the next few months.

Production was cut substantially, and at about the same rate as in the previous month. Higher output was reported by 22 percent of the firms; 42 percent reduced production. Arizona firms have taken concerted action to bring production in line with demand — this was the eighth straight monthly reduction — and it will continue until the new order rate turns around.

Employment saw another major drop in May, at the same rate of decline as in April, which was the largest one-month rate of decline in over seven years. May marks the twelfth consecutive monthly decline, with only 10 percent adding employees and a very large 43 percent paring payrolls.

The economic recovery has not started yet, with May seeing a continuation of the downswing. Yet, the rates of decline on both delivery times and new order receipts are signaling that we are getting close to the low point of this recession. The added stimulus of the July tax cuts and Social Security increases makes it now appear likely that some resumption of economic growth will be evident before summer ends, and that this will occur without forcing any major price escalation. The results of the May purchasing survey are shown in Table 2.

TABLE 2

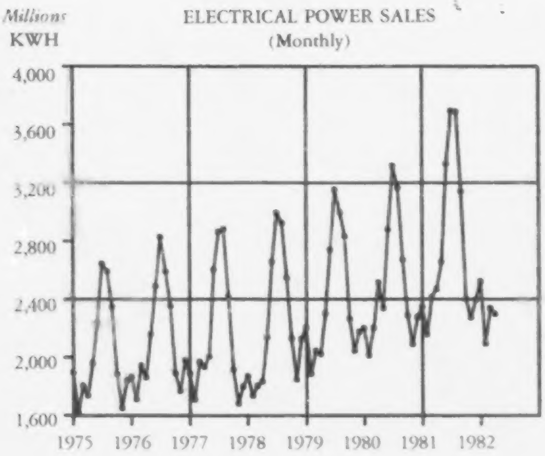
MAY PURCHASING SURVEY

	Percent of Purchasing Managers Indicating Each Response (May compared to April)		
Key Indicators	*Higher*	*Same*	*Lower*
Prices paid for major commodities	21	59	20
Delivery time from vendors	18	61	21
Purchased materials inventory level	15	35	50
New orders received	33	26	41
Production	22	36	42
Employment	10	47	43

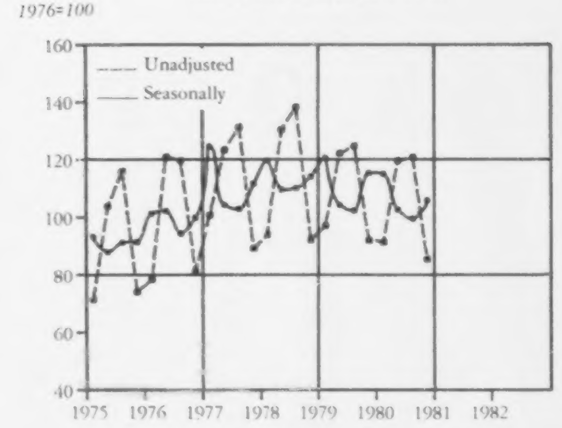
Source: Survey of Purchasing Managers Association of Arizona and the Purchasing Managers Association of Southern Arizona.

Arizona Economic Indicators

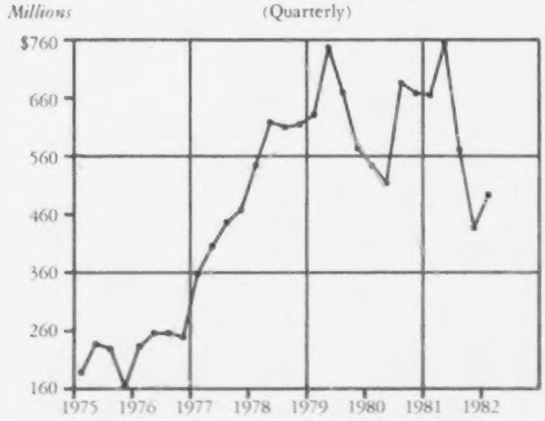
ELECTRICAL POWER SALES
(Monthly)



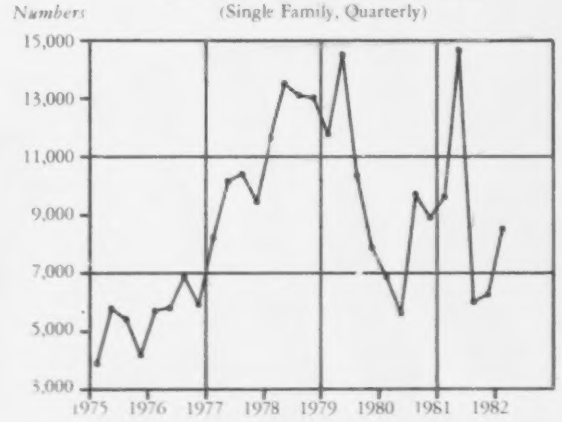
ARIZONA TOURISM INDEX



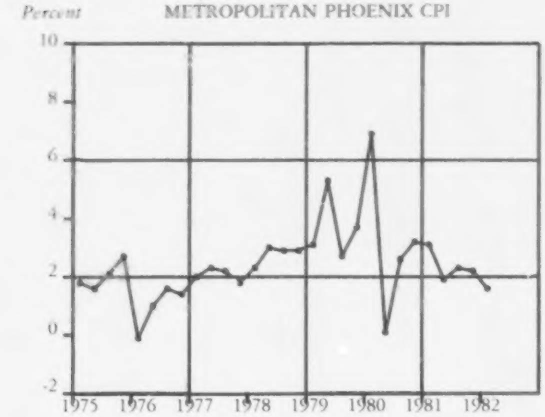
ARIZONA BUILDING PERMITS
(Quarterly)



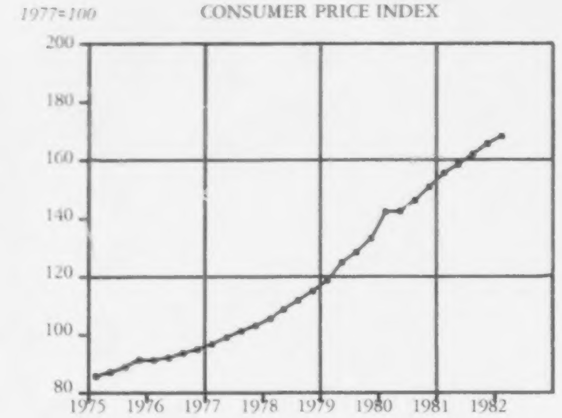
ARIZONA NEW HOUSING STARTS
(Single Family, Quarterly)



QUARTERLY CHANGE IN
METROPOLITAN PHOENIX CPI



METROPOLITAN PHOENIX
CONSUMER PRICE INDEX



Source: All data compiled by the Bureau of Business and Economic Research, College of Business Administration, Arizona State University.

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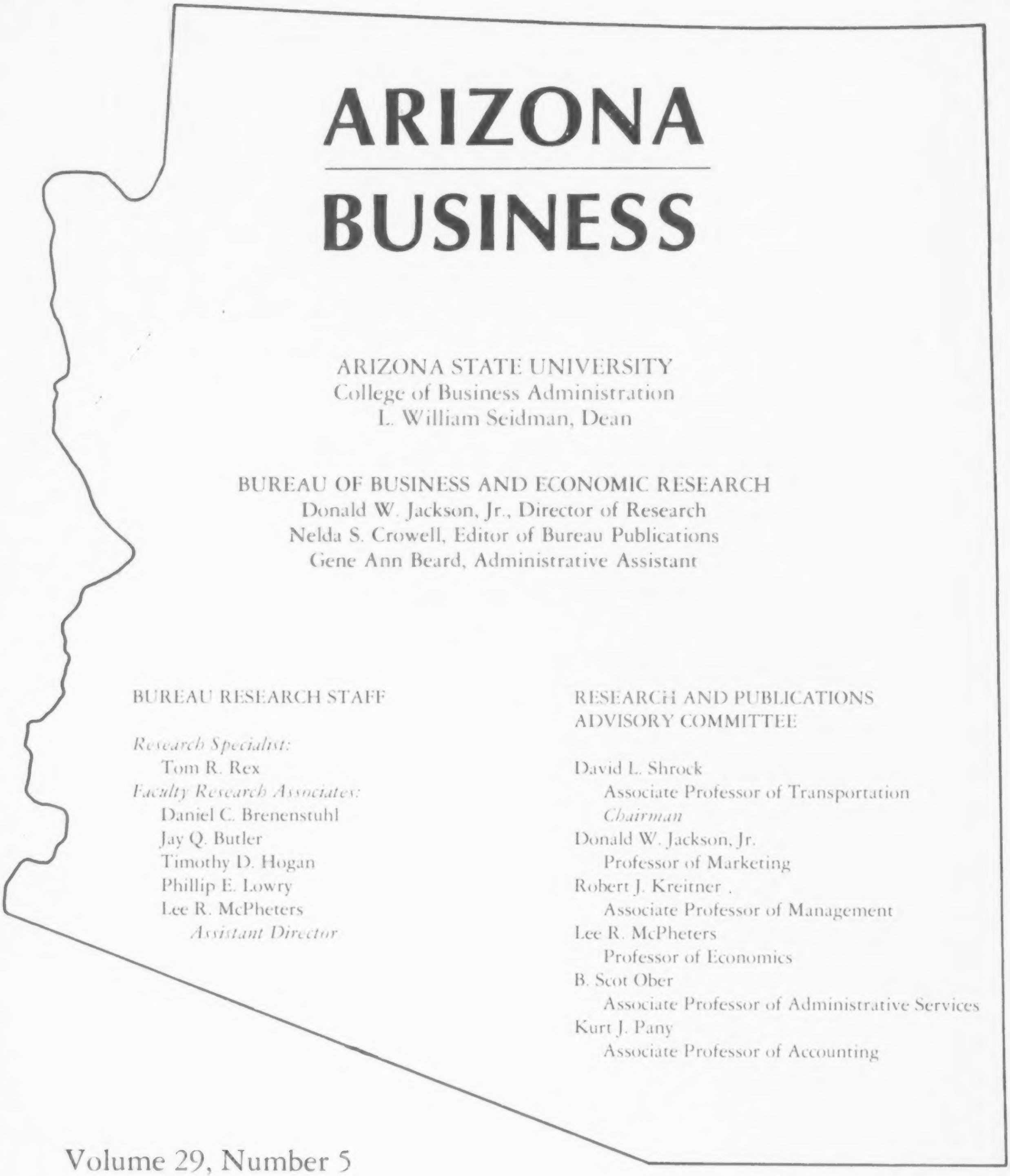

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Report To The Reader

It is a pleasure to welcome Mr. L. William Seidman to Arizona State University as the new Dean of the College of Business Administration. He succeeds Dr. William Reif, who has been Interim Dean the past year. Dean Seidman has named Dr. Reif to be Associate Dean.

Dean Seidman comes to ASU from Phelps Dodge where he has served as the corporation's chief administrative and financial officer since 1977 and vice chairman of the board since 1980. He was formerly executive director of the White House Economic Policy Board under President Gerald Ford and was administrative head of Ford's Vice President's office in 1974. He has also served as managing partner of Seidman and Seidman, an international certified public accounting firm.

The new Dean is chairman of the board of the Washington Campus, a Washington D.C. consortium of leading institutions of higher education that includes Dartmouth, Cornell, UCLA, University of Texas (Austin), University of California (Berkeley), the University of Michigan, and others. Its purpose is to provide graduate business students and executives with courses focused on business-government relations.

Dean Seidman's experience in higher education includes several years teaching finance for Michigan State University. He is a member of the Grand Valley College Board in Michigan, of which he is a founder.

He is also a trustee of the Conference Board of New York, serves as special advisor to the Aspen Institute for Humanistic Studies, and is a member of the White House Productivity Advisory Committee.

He graduated Phi Beta Kappa from Dartmouth in 1943, earned a law degree from Harvard in 1948, and a master's degree in business administration from the University of Michigan in 1949.

In accepting the appointment, Dean Seidman said, "This position is a very exciting one for me. I believe it provides an opportunity to be of real service to higher education and to the community, and I look forward with great pleasure to working with President Nelson, the faculty, students and alumni of this fine institution."

Tourist Taxes: A Potential Source of Revenue for Arizona

ARTHUR BLAKEMORE
WILLIAM J. BOYES

State and local government officials throughout the United States have become increasingly concerned about their ability to fund public programs. The combination of tax revolts, revenue-reducing recessions, and cutbacks in federal revenue sharing have caused drastic reappraisals of the funding abilities of most state and local governments. On top of the revenue problems, states may be given additional spending responsibility for income transfer programs under President Reagan's "New Federalism." Consequently many state legislatures are presently studying ways to attract taxable industries while continuing to reduce the fiscal burden on their own residents. States possessing extractable natural resources that are in demand in other states have found the most expedient form of tax to be an excise tax. Texas, Louisiana, Montana, Oklahoma, Alaska, and Wyoming, for example, have levied substantial extraction taxes on their natural resources.

A closer examination of this form of taxation indicates certain features that make it very appealing to the tax-imposing state. First, the industry itself is tied to the region — it cannot migrate to another region to avoid the tax. Second, the residents of the state do not pay the tax — the tax is passed on to consumers of the resources, consumers who primarily reside in other states. In the language of economics, these states are "tax exporting." Third, the demand for the natural resource being taxed is not seriously reduced by the tax imposition — the demand is relatively "inelastic." Given these features, those states with extraction taxes have been able to reduce the tax burden on their residents and/or offer substantial public services without having to raise their taxes. Of the total surplus created by state governments in 1980-1982, 45 percent was generated by the six states mentioned above.

A tourist tax could raise between $60 million and $270 million annually for the State of Arizona from nonresidents. Adverse effects would be expected to be slight and could be readily minimized.

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THE TOURIST TAX

The tax-paying states have just as eagerly sought to block this type of tax shifting. Courts have recently ruled against Louisiana's tax on oil and gas while several states have filed a class-action suit against Montana's and Wyoming's extraction taxes. Arizona, on the other hand, has access to a form of tax exporting that has never been challenged—a tourist tax. This type of tax has all the desirable characteristics attributable to the extraction taxes. The industry is tied to Arizona; its consumers are primarily nonresidents of Arizona; the demand for it is relatively inelastic;[1] and it is a major industry in Arizona—the second largest.

Tourism ranks as one of the most important sectors in the Arizona economy in its impact both on the gross state product and on the employment of Arizona citizens. An estimated 14.7 million tourists visited Arizona during the 1979-1980 fiscal year and spent more than $3 billion. Exhibit 1 displays the basic mode of travel and pattern of visit in Arizona while Exhibit 2 displays the expenditure patterns.

The purpose of this article is to examine the tourist tax as a revenue source for the State of Arizona. In the next section the design of a "tourist" tax and its benefits and costs are discussed. The final section is devoted to deriving the revenue-generating power of the tax and the economic consequences of the tax on the tourist industry. A tax that significantly alters the number of tourists visiting the state would place an inequitable burden on particular industries. Therefore, this article discusses in detail the effects of such a tax on the tourism industry.

THE DESIGN OF A TOURIST TAX

The *State Tax Guide*, published by the Commerce Clearing House,[2] indicates a substantial interest among states in "tourist taxes." Florida, California, Colorado, and Nevada, for example, have taxes on motels and hotels (bed taxes) that are substantially higher than in other states. Indeed, the desirability of such taxes has not escaped the attention of cities in Arizona; Phoenix, Tucson, Scottsdale, and others impose modest bed taxes. In addition, New York City and the District of Columbia have city and district bed taxes that amount to 10 percent of the cost of the room. The bed tax is the most commonly used tourist tax because it is easily levied and administered. But other forms of tourist taxes have been levied including taxes on gambling in Nevada, taxes on vehicle rentals in California, New York, and Florida, and

EXHIBIT 1

1979-1980
ARIZONA TOURISM BY MODE OF TRAVEL

Mode	*Number of Tourists*	*Number of Travel Parties*	*Total Expenditures (000)*	*Trip Expenditures Per Party*	*Trip Expenditures Per Person*	*Weighted Average Length of Stay*[a]	*Expenditures Per Party Per Day*	*Expenditures Per Person Per Day*
Highway . . .	12,903,683	5,161,473	$2,025,363.9	$392.40	$156.96	6.8	$57.71	$23.08
Airline	1,812,986	1,208,657	$1,018,049.9	$842.30	$561.55	8.5	$99.09	$66.06
Total	14,716,669	6,370,130	$3,043,413.8	$477.76	$206.80	7.1	$67.29	$29.13

[a] Weighted by the number of persons in a party so that the unit of measure is "person days".

Source: Bureau of Business and Economic Research, College of Business Administration, Arizona State University, 1981.

EXHIBIT 2

1979-1980
CATEGORY DISTRIBUTION OF ARIZONA TOURIST EXPENDITURES BY MODE OF TRAVEL

Category	*Highway*		*Airline*		*Total*	
	(000)	*Percent*	*(000)*	*Percent*	*(000)*	*Percent*
Lodging	$ 420,669.8	20.8	$ 345,513.2	33.9	$ 766,183.0	25.2
Restaurant	491,507.4	24.3	273,302.7	26.8	764,810.1	25.1
Groceries	138,004.6	6.8	26,287.8	2.6	164,292.4	5.4
Gasoline	448,697.2	22.2	38,462.4	3.8	487,159.6	16.0
Other transportation/related items	87,461.4	4.3	78,992.0	7.8	166,453.4	5.6
Entertainment	91,102.2	4.5	58,740.2	5.8	149,842.4	4.9
Retail	265,839.2	13.1	154,941.9	15.2	420,781.1	13.8
Other	82,082.1	4.0	41,809.7	4.1	123,891.8	4.0
Total	$2,025,363.9	100.0	$1,018,049.9	100.0	$3,043,413.8	100.0

Source: Bureau of Business and Economic Research, College of Business Administration, Arizona State University, 1981.

taxes on amusements, candy, food at restaurants, and apartment rentals in several states. What these states and cities have in common is their attractiveness to tourists; their "extractable resource" is their climate, mountains, oceans, and/or cities.

Clearly, Arizona shares some of these attributes. Yet, the state government has not shared the tax burden with its out-of-state visitors to the degree other states have. In its attempt to stimulate the tourist industry, Arizona has failed to recognize the market characteristics of its product. Rather than reaping the benefits of the tourist industry through taxes, Arizona has subsidized the tourist—providing medical services, roads, reduced municipal golf course rates, and so on. In contrast, Nevada's gambling tax and Florida's tourist and severance taxes have provided sufficient revenue that their citizens need not pay income taxes. Other states have chosen to increase their public services including medical care, highway systems, and educational facilities or in the 1980-82 recession, have chosen not to cut services as Arizona has been forced to do. The key question is, Can the state of Arizona benefit from a tourist tax beyond those already imposed by municipalities without injuring the tourist industry?

A tourist tax has three major features that permit a successful shift of some of the tax burden to a jurisdiction's noncitizens. The tax must be relatively easy to administer and not require a large bureaucracy and costly collection procedure. Second, the tax must be paid primarily by nonresidents of Arizona; and third, it should not divert tourists to other states in substantial numbers thereby diminishing business in Arizona.

The first criterion is easily met by tourist taxes on hotels, motels, restaurant services, vehicle rentals, and amusements. Since a state sales tax already exists on all of these items, it is a trivial task to charge additional excise taxes and collect the revenue through the same channels. Indeed, this may not entail any expansion of the existing bureaucracy. If the tax is expanded to condominium leasing and short-term apartment rentals (less than six months) the procedure is more complicated since a state sales tax is not now collected on these services. However, an excise-sales tax on rentals, which could be deducted on state income tax forms for Arizona residents, could be easily and simply levied.

The second criterion—that the tax be paid primarily by nonresidents—is more complicated. The various tourist taxes differ in the extent to which they shift the tax burden without raising taxes from residents. Those levied on restaurants would certainly impinge on in-state residents. A similar argument can be made regarding the various state amusements and attractions. On the other hand, the demand for hotel and motel rooms and vehicle rentals is much more prevalent among non-Arizonans than Arizonans, thus best meeting the second goal. For instance, in 1980, only about 4 percent of expenditures on lodging is estimated to have come from in-state residents (see Exhibit 3). However, deduction on state income tax forms would allow the state to differentiate between the resident and nonresident if it chose to tax these other goods and services.[3] Residents paying no taxes could complete the forms and receive a return compensating them for the tourist taxes they paid throughout the year.

EXHIBIT 3

EXPENDITURES ON TOURIST LODGING
BY ARIZONA RESIDENTS

Expenditures by Tourists	$766,183,000
Expenditures by Arizona Residents	$ 31,814,500
Total	$797,997,500

Source: Bureau of Business and Economic Research, College of Business Administration, Arizona State University, 1981.

An Inelastic Demand

Finally, to satisfy the last criterion—that the tax should not divert tourists to other states—the tax should be levied on a good or service that has a relatively inelastic demand. In this way the increased price of the product due to the tax can be passed to the consumer without a significant decrease in the purchases of the product. In an article in *Arizona Business*[4], Hoffman and Low found the amount of daily expenditures by visitors to have relatively little influence on an individual's desire to return for a vacation in Arizona. The authors estimated that an additional $10 of expenditures per day lowers the likelihood of a return visit only by 0.5 percent. Thus, a tax that raised tourists' expenditures an average of $10 per day could be expected to induce approximately one out of every 200 potential returning visitors not to visit Arizona. It would have virtually no impact on trips made purely for business purposes.

Although, as the Hoffman-Low study suggested, there is no good substitute for Arizona's product—climate, desert, golf, tennis, and other facilities—it is instructive to compare Arizona tax collection to those of nearby or competitive states. It would not be desirable to impose a tax that is out of line with competing tourist-

EXHIBIT 4

STATE TAX COLLECTIONS AND TAX RATES (SELECTED STATES) 1979

State	*Sales Tax Rate (Percent)*	*Receipts (Million Dollars)*	*Motor Fuel Tax Rate (Cent/gal.)*	*Severance ($000)*
Arizona	4^{c}	704	8	0
California	$6^{a,b,c,d}$	5,650	7	25,954
Colorado	$3^{a,b,c,d}$	312	7	81,121
Florida	$4^{a,c,d}$	172	8	121,254
Hawaii	$4^{c,d}$	1,947	11.5/13.5	1,905
Nevada	$3.5^{a,c,d}$	151	6	25
Texas	$4^{a,c}$	2,385	5	1,525,118
Washington DC	$5^{c,d}$	108		NA

[a] Exempts food

[b] State income tax allowance

[c] Use taxes, in addition to sales tax, not listed

[d] Taxes on motels, hotels in addition to sales taxes not listed

Source: *Statistical Abstract of the U.S.*; Commerce Clearing House, *State Tax Guide*

oriented states. Exhibit 4 shows sales and motor fuel tax rates for several states and the District of Columbia. While the Arizona tax rates lie in the middle of the distribution for the states shown, these figures are misleading. The State of Arizona suffers from having no other excise type taxes such as severance taxes or use taxes or taxes on hotel and motel rentals, etc.[5] Of particular importance here is the substantial revenue provided by severance taxes in Colorado, Florida, and Texas and the prominence of use taxes and bed taxes other tourist states. Only the State of Arizona and Texas do not impose bed taxes, but in Texas, the revenue from the extraction of oil more than compensates for the lack of tourist taxes. As a result of the selective use of such taxes, these other states have shifted much of the tax burden in their state to residents of other states. In fact, Florida, Nevada, and Texas have no state income taxes.

REVENUE PROJECTIONS

As Exhibit 4 indicates, Arizona lags behind other tourist-oriented states in levying tourist taxes. The issue, then, is whether Arizonans can export a significant proportion of their tax responsibilities. Utilizing the data generated by the study *Tourism and Travel in Arizona*[6] for the fiscal year 1979-1980 and displayed in Exhibits 1 and 2 above, one can estimate the potential tax revenue that can be derived from *out-of-state* visitors alone.[7] The calculations are shown in Exhibit 5. An additional 10 percent excise tax above those imposed by municipalities on lodging, restaurants, entertainment and rental cars could yield $184.7 million from out-of-state visitors if the tax did not reduce tourism. An additional 10 percent tax levied only on lodging and transportation (primarily rental cars) could yield $93.3 million. A 15 percent tax on the four items listed above could raise as much as $277.1 million. While these rates are probably higher than rates that would actually be applied, they do dramatize the revenue potential. A more realistic 3 percent tax would yield an additional $65 million if broadly defined and $28 million if applied only to lodging and car rentals. In addition, these figures are upward bound estimates because tourism is assumed not to decline in the calculations. The Hoffman-Low study predicts that a 13 percent rise in costs per day reduces the likelihood of a visit by one-half of one percent or one out of every 200 vacation visitors.[8] Hence, this must be taken into account to provide an appropriate benefit-cost comparison.

The 10 percent tax on lodging, restaurants, entertainment, and rental cars raises the average daily expenditure $1.24 for each highway visitor, a 5 percent rise; and $4.91 for each visitor coming by airline, a 7 percent rise. Thus, one out of every 350 potential airline visitors (business related) and one out of every 500 (nonbusiness) potential highway visitors would not visit Arizona due to a 10 percent tax on lodging, restaurants, car rentals, and entertainment if other states did not change their tax. As Exhibit 5 shows, 22,900 highway visitors and 5,200 airline visitors would not come to Arizona. This would be an expenditure loss of $7.7 million out of a total of more than $3 billion, or .3 percent.

The total gain to Arizonans, then, would be approximately $177 million at a 10 percent tax rate. Compare this to the Arizona State Lottery which raised $40 million[9] for the General Fund in its first year of operation, predominantly from its own citizens. Arizona has an untapped source of revenue that is already used by state governments in most tourist-oriented regions.

CONCLUSION

A tourist tax for the State of Arizona appears to be an attractive possible source of tax exporting. Depending on how broadly the tax is applied and how high the rate is set, it could be expected to raise between $60 million

EXHIBIT 5
REVENUE LOSS CALCULATIONS

(1) Expenditures Per Person Per Day by Mode of Travel:

Highway	$23.08
Airline	$66.06

(2) Expenditures on Taxable Categories Per Person Per Day by Mode of Travel

	Percent of Daily Expenditures		*Daily Expenditures*	
	Airline	*Highway*	*Airline*	*Highway*
Lodging	33.9	20.8	$22.34	$4.80
Restaurants	26.8	24.3	17.7	5.60
Rental Cars	7.8	4.5	5.15	1.04
Entertainment	5.8	4.5	3.83	1.04

(3) Tax Increases Per Day

	10 Percent		*15 Percent*	
	Airline	*Highway*	*Airline*	*Highway*
Lodging	$2.23	$ .48	$3.36	$ .72
Restaurants	1.77	.56	2.66	.84
Rental Cars	.52	.10	.77	.16
Entertainment	.38	.10	.57	.16
Total	$4.91	$1.24	$7.66	$1.88

(4) At 10 percent tax, Airline Passengers spend $4.91/$66.06 = 7.4 percent more while Highway Travelers spend $1.24/$23.08 = 5.4 percent more.

(5) At 15 percent tax, Airline Passengers spend $7.66/$66.06 = 11.6 percent more while Highway Travelers spend $1.88/$23.08 = 8 percent more.

(6) Likelihood of Not Returning

	Airline Traveler	*Highway Traveler*
10 percent tax	.0028	.0020
15 percent tax	.0045	.0038

(7) Tourist Reductions Due to Tax Increase
Likelihood of Not Returning X Number of Tourists X Fraction that are Non-Business Trips:

	Airline	*Highway*
10 percent tax	3,200	22,900
15 percent tax	5,170	35,520

(8) Revenue Lost
Reduction of Tourists X Trip Expenditures Per Person:

	Airline	*Highway*
10 percent tax	$1,796,900	$5,884,400
15 percent tax	2,903,000	9,127,200

Source: Developed by the authors with information from *Tourism and Travel in Arizona,* Bureau of Business and Economic Research, Arizona State University, 1981.

Note: Lines (4) and (5) are derived by dividing line (1) into the totals of line (3). Line (6) is calculated by comparing the percentages of lines (4) and (5) to the Hoffman-Low finding that visits are reduced by .005 per 15 percent rise in daily costs.

and $270 million annually in 1980 dollar terms from nonresidents. It is not without faults, however. The main problem is a slight potential reduction in tourist business as the cost of an Arizona vacation is increased. But this has been estimated to be no greater than .3 percent, $8 million (at a tax of 10 percent) out of $3 billion spent annually by out-of-state visitors. In addition, some of the tax will unavoidably fall on Arizonans to the extent that they use the services being taxed. This can be kept to a minimum by restricting the tax to lodging and automobile rentals, although such restrictions could result in as much as $90 million less revenue from out-of-state tourists annually. Another possibility is to have a more broadly based tax but to grant tax deductions for such expenditures for Arizona citizens on the Arizona income tax, much in the same manner as the gasoline tax deduction.

Regardless of the final form of a tourist tax, popular acceptance of the program is likely given the extra public services and/or tax reductions that can accrue. Furthermore, the tax need not necessarily reduce tourism if some of the tax revenue is used to promote tourism through out-of-state advertising and state expenditures for public services that attract tourists. Given these results plus the current critical shortages of public funds and the future increase in the responsibility for its citizens' public programs, this source of tax revenue bears investigation and consideration.

The inelastic nature of Arizona's tourism is demonstrated in Dennis L. Hoffman and Stuart A. Low's, "Arizona Tourism and Conventioneer Attitudes," *Arizona Business,* August/September, 1980.

Commerce Clearing House, *State Tax Guide*, 1980-1981.

Colorado, for example, provides an allowance on state income tax forms for sales taxes and use taxes. These need not be a complication on the tax form. They can be treated much as the present deduction for gasoline taxes with optional tax tables.

Hoffman-Low, ibid.

Until 1982 Arizona levied a small severance tax on copper. The tax rate was less than the limit in virtually any other state.

Arizona State University, Bureau of Business and Economic Research, *Tourism and Travel in Arizona,* 1981.

Obviously, the total tax revenue would be greater to the extent that in-state residents purchase the goods and services. However, it is only the tax exporting that should be of interest to policymakers.

Hoffman and Low use a statistical technique that permits the estimation of the probability of visiting Arizona as various determinants of tourism change. In terms of the present study, we were interested in the probability of visiting Arizona if the daily cost of the vacation increased.

Arizona Lottery Commission. The loss of revenue from not taxing grocery store food is estimated to have been $45 million in fiscal year 1982. Of this, about 20 percent would have been paid by tourists.

Budget for the 1981 Phoenix Family of Four

ROBERT T. KEIM
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For 1981 two methods were used to determine the budget for the hypothetical Phoenix area family of four. The direct-pricing method, comparable to the method used for Tucson, has been used in the Phoenix area since 1968. The second method, indexing using the Consumer Price Index (CPI), is more comparable to the method used by the U.S. Bureau of Labor Statistics (BLS) for other cities. Using this indexing method, Phoenix ranked seventeenth in the list of twenty-five cities from all areas of the country.

The Urban Family of Four in Phoenix needed $27,089 to maintain a moderate standard of living in 1981, using data gathered by direct pricing in the stores. The budget, if computed by using the Consumer Price Index, is $25,015, placing Phoenix seventeenth among twenty-five U.S. cities. The budget study is produced by the ASU Bureau of Business and Economic Research in the College of Business Administration in cosponsorship with Valley National Bank.

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By using a direct-pricing technique of budget computing, the hypothetical Phoenix area family of four required $27,089 to maintain a moderate standard of living. This figure represents a 9.4 percent increase over the adjusted 1980 direct-price budget level. Using an indexing methodology, wherein the budget levels are adjusted according to changes in the Phoenix Consumer Price Index, the Phoenix family needed $25,015 to maintain this moderate level or a 10.8 percent increase over the 1980 indexed budget amount.

The Phoenix Family of Four Budget Study is based on the methodology developed by the Bureau of Labor Statistics as described in Bulletins 1570-1 and 1570-3 (Autumn, 1966). Products in the budget, specifications describing each item, and quantities allowed were set by the BLS, based on consumer expenditure surveys done in 1963. These surveys showed the goods and services that families were actually purchasing at the time. The contents of the budget provided for a lifestyle described as moderate and included the number of children, maintenance of health and social well-being along with participation in community activities. The budget does not reflect actual average expenditures of a family of four, but instead represents "the collective judgment of families as to what is necessary and desirable to meet the conventional and social as well as physical needs of families of the budget type."[1]

Since 1968, the Bureau of Business and Economic Research, College of Business Administration at Arizona

State University has collected and reported the results of the Urban Family of Four Budget Study. This year's study was done in cosponsorship with Valley National Bank. Items in the budget, based on consumption patterns determined by the BLS, are priced during the fourth quarter each year using two different techniques.

The budget figures are determined for a very specific family of four described as typical of urban center United States families in 1963. Its members include a 38-year-old husband employed full time, a wife not employed outside of the home, a 13-year-old son, and an 8-year-old daughter. The family is assumed to be well established in the community and in good health. The couple has been married fifteen years and the husband is an experienced worker in his field. The family has accumulated an average inventory of home furnishings, clothing, major durables, and other items. Three-fourths of the described families are considered homeowners with mortgage payments on a house they purchased seven years earlier.[2] The remaining one-fourth are renters. This ratio corresponds with current information regarding Phoenix's homeowner-renter ratio.

Specifications in the study, along with the weights applied to the goods and services, have not been revised and continue to be based on the needs of the early 1960s family. As a result they do not necessarily reflect the needs or desires of a current family of four. Today's families would generally change their buying patterns to some extent to respond to the fluctuation of prices and available commodities. Consumers normally substitute lower priced goods and services for those that have had rapid price increases. Such substitutions are not included in this budget.

Since consumption changes are not considered, the Urban Family of Four Budget (UFFB) is most useful in determining the change in prices of certain nearly identical goods from year to year in the Phoenix Metropolitan Area. These increases and decreases in price may be more valuable than the dollar figures cited for actual living costs.

Phoenix is not one of the urban centers on which the Bureau of Labor Statistics keeps Family of Four or Consumer Price Index data. To fill this void, the Bureau of Business and Economic Research has produced the Urban Family of Four Budget Study since 1968. The study is done according to the original specifications. Data on approximately 400 consumer goods and services are collected by direct pricing. The BLS, on the other hand, priced directly for the last time in 1969. The current figures for other cities are determined by updating the 1969 direct prices by components of the Consumer Price Index. Due to the difference in methodology, the figures cited in the Metropolitan Phoenix study using direct pricing are comparable only to the Tucson data collected by the Division of Economic and Business Research, College of Business and Public Administration, University of Arizona. The Tucson budget data are collected using the same methodology as the Phoenix area direct-priced budget. The indexed budget for Phoenix is more comparable to the budgets reported for the BLS cities.

Differences between the two budget strategies were discussed in detail in an article last year in *Arizona Business* comparing the 1969 through 1980 budgets.[3] Basically the differences can be attributed to the mix of products priced to develop the CPI versus the UFFB.

FAMILY OF FOUR BUDGET COSTS: DIRECT PRICING

A hypothetical Phoenix family of four required $27,089 to maintain a moderate standard of living in 1981. This budget reflects a 9.4 percent increase over the revised 1980 budget for the same family unit. The categories with the largest relative increase in prices in 1981 are Taxes (15.2 percent), Transportation (14.1 percent), Medical Care (11.9 percent), and Clothing (9.1 percent). Each of these categories, with the exception of Clothing, also had substantial dollar increases in 1981. Table 1 details a comparison of all the major categories of the Phoenix area budget for 1980 and 1981. A breakdown of the major areas into significant subcategories is necessary in order to analyze the budget information and explain the percent changes that occurred.

Total Family Consumption

The Housing category is the major component of the total budget, with 22.9 percent allocated to Housing costs. The BLS methodology considers that 25 percent of the families are renters and 75 percent are homeowners. Renter costs are comprised of monthly rent for an unfurnished three bedroom apartment or single-family dwelling, utility costs, kitchen appliances, and insurance for household contents. Homeowner shelter costs include mortgage and principal for a home purchased seven years ago (1974 in this year's study), property tax, utilities, repairs, kitchen appliances, and household insurance. Principal and interest payments on a home increased 16.3 percent between 1973 and 1974, with the interest rate set at 8.5 percent.

TABLE 1

PHOENIX FAMILY OF FOUR BUDGET COSTS
PERCENTAGE CHANGE, 1980-1981
DIRECT PRICING

	1981	*1980*[a]	*Percent Change*
TOTAL BUDGET	$27,089	$24,762	9.4
TOTAL FAMILY CONSUMPTION	19,943	18,498	7.8
Food	5,964	5,756	3.6
Housing	6,213	5,703	8.9
Transportation	2,823	2,474	14.1
Clothing	1,651	1,514	9.0
Personal Care	668	631	5.9
Medical Care	1,577	1,409	11.9
Other Family Consumption[b]	1,047	1,012	3.5
OTHER COSTS[c]	930	868	7.1
TAXES	6,216	5,397	15.2
Social Security	1,800	1,520	18.4
Income Taxes	4,416	3,877	13.9

[a] Revised

[b] Other Family Consumption includes reading, recreation, educational supplies, tobacco, alcoholic beverages and miscellaneous expenses.

[c] Other Costs include life insurance premiums, occupational expenses, and gifts and contributions.

NOTE: Details may not add to totals due to rounding.

Source: Bureau of Business and Economic Research, College of Business Administration, Arizona State University in cosponsorship with Valley National Bank.

Based on a survey of 250 rental dwellings in the Phoenix area, an increase in rent of 4.0 percent occurred between 1980 and 1981. The average monthly rent in the survey was $422, compared to an average principal and interest payment of $236 per month on a 1974 mortgage. Total utilities rose 11.1 percent with electricity showing a minimal 2.8 percent increase and gas jumping 19.8 percent. Kitchen appliances increased 2.9 percent while renter's insurance went up 11.0 percent. These increases result in a total increase in renter costs of 4.9 percent.

Homeowner costs for 1981 also included utilities, which rose 12.2 percent. This significant increase can be attributed to a 2.8 percent increase in electricity, a 19.3 percent rise in gas, an 8.3 percent increase in water, and a large 26.0 percent increase in sewer and refuse charges. Additional homeowner costs are household insurance, which decreased .08 percent, and property taxes, which showed an 8.0 percent decrease. Overall, homeowner costs increased 12.4 percent, a much higher increase than the 3.0 percent of 1980.

The Food category, which makes up 22.0 percent of the 1981 budget, is divided into two main categories — Food At Home and Food Away From Home. Food At Home rose only 4.9 percent, while Food Away From Home increased 7.3 percent. The increase in Food Away From Home is primarily due to a 38.5 percent increase in school lunches, attributable to cutbacks in federal assistance. Restaurant meals, the other component of Food Away From Home, rose only 3.2 percent. Thus, despite large increases in some areas of Food costs, the total rise was only 3.6 percent due to the heavier weighting of items with minimal increases.

Transportation costs (10.4 percent of the total budget) increased 14.1 percent in 1981. This significant rise is primarily due to a 23.2 percent increase in the price of an automobile, a 10.1 percent increase in gas, and a 24.6 percent increase in Public Transportation. Public Transportation costs were characterized by a 60.0 percent increase in fares for public transit to schools and a 20.7 percent increase in other bus fares. The increase in Public Transportation noted in the Urban Family of Four Budget Study is probably less than the true increase due to the budget methodology, which sets fixed prices for air and train fares based on costs in the 1960s.

Clothing costs rose 9.0 percent, a substantial increase over the 3.3 percent increase in 1980. The rise in clothing can be attributed to increases close to 10.0 percent in men's, women's, and boys' clothing.

Personal Care, which includes items such as haircuts, toiletries, and paper goods, increased only 6.0 percent in 1981. This is a small increase compared to double-digit increases in past years.

As in 1980, Medical Care, a category which includes medical, dental, and optical services and goods, hospital-surgical insurance, and prescription and nonprescription drugs, makes up 5.8 percent of the total budget. Medical Care costs increased 11.9 percent due largely to a 10.6 percent increase in physician visits, and a rise in hospital insurance of 13.7 percent. Increases of over 6.0 percent in every other subcategory also contributed to the overall rise in Medical Care.

The final category included in Total Family Consumption is Other Family Consumption. This category (3.5 percent of the total budget) includes reading materials, recreation, educational supplies, tobacco, alcoholic beverages, and miscellaneous supplies. This category rose 3.5 percent in 1981.

Other Costs

Other Costs is a separate subgroup and is not considered under Total Family Consumption. It includes life insurance premiums, occupational expenses, and gifts and contributions. Other Costs increased 7.1 percent in the past year.

Taxes

Total Taxes for the urban family include Social Security, federal income tax, and state income tax. In 1981 Social Security rates rose from 6.1 percent to 6.7 percent while the base increased to $29,700. As a result, the hypothetical family of four paid Social Security tax on every dollar they made. Federal income taxes were up 14.5 percent in 1981, a smaller increase than the previous year due to the 5 percent tax cut effective July 1, 1981. However, federal taxes still rose substantially more than the increase in Total Family Consumption because the hypothetical family consistently moves into a higher tax bracket as their income rises. State income taxes rose 10.2 percent.

DISTRIBUTION OF EXPENDITURES

Figure 1 depicts the percentage of the total budget allocated to each major category. The proportions changed somewhat in 1981 with the Tax and Housing percentages both increasing from 22.0 percent to 22.9 percent, and the proportion for Food dropping from 23.6 percent to 22.0 percent. All other components remained in essentially the same proportions as in 1980. Once again, Food, Housing, and Taxes comprise over two-thirds of the hypothetical family's total budget.

COMPARISON WITH TUCSON

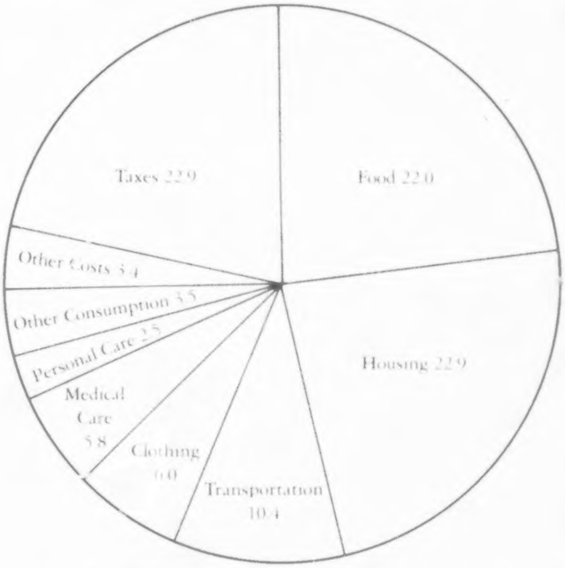
Phoenix and Tucson are the two major metropolitan areas in Arizona and account for three-fourths of the state's population. Because of similarities in the direct-pricing methodology, the Tucson area Family of Four data can be readily compared to the Phoenix data. Table 2 provides a comparison of the major categories of the Phoenix and Tucson Urban Family of Four Budgets compiled by direct pricing. Overall, the budget for Phoenix is 4.9 percent higher than that of Tucson.

FAMILY OF FOUR BUDGET COSTS INDEXED USING THE CPI

Indexing the 1969 budget using the Consumer Price Index for the Phoenix area[1] resulted in the total family budget amount of $25,015 which is a 10.8 percent increase over the 1980 revised figures. The reason for

FIGURE 1

PHOENIX FAMILY OF FOUR BUDGET COSTS
Percentage Distribution of Expenditures, Autumn, 1981



Source: Bureau of Business and Economic Research, College of Business Administration, Arizona State University, in cosponsorship with Valley National Bank.

TABLE 2
COMPARISON OF FAMILY BUDGETS: PHOENIX AND TUCSON, 1981
(Urban Family of Four)

	Phoenix	*Tucson*
TOTAL BUDGET	$27,089	$25,832
TOTAL FAMILY CONSUMPTION	19,945	19,220
Food	5,964	5,579
Housing	6,215	6,152
Transportation	2,825	2,624
Clothing	1,651	1,740
Personal Care	668	625
Medical Care	1,577	1,436
Other Family Consumption[a]	1,047	1,086
OTHER COSTS[b]	930	905
TAXES	6,216	5,707
Social Security	1,800	1,718
Federal Income Tax	3,813	3,460
State Income Tax	603	529

[a] Other Family Consumption includes reading, recreation, educational supplies, tobacco, alcoholic beverages and miscellaneous expenses.

[b] Other Costs include life insurance premiums, occupational expenses, and gifts and contributions.

Source: Phoenix data compiled by the Bureau of Business and Economic Research, College of Business Administration, at Arizona State University in cosponsorship with Valley National Bank. Tucson data compiled by the University of Arizona's Division of Economic and Business Research in cosponsorship with Valley National Bank.

FIGURE II
TOTAL BUDGET
(Phoenix Urban Family of Four)

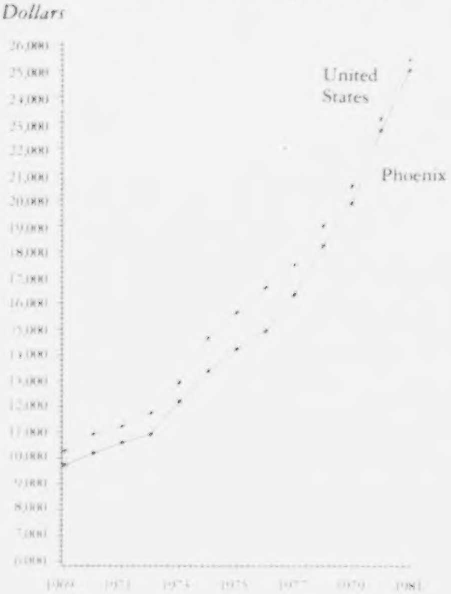


FIGURE III
FOOD
(Phoenix Urban Family of Four)

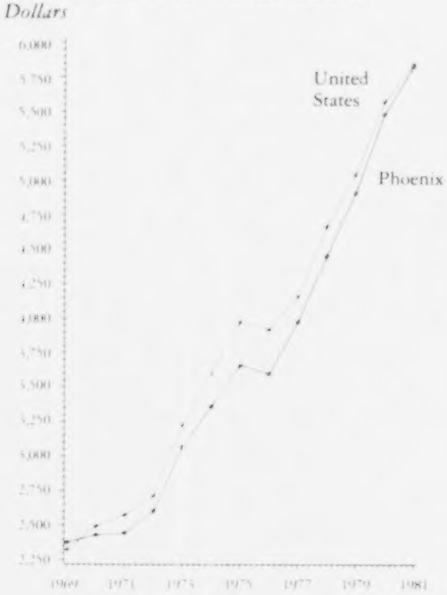


FIGURE IV
HOUSING
(Phoenix Urban Family of Four)

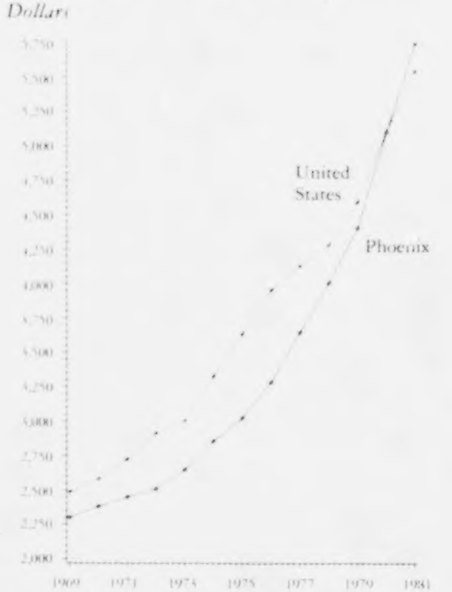
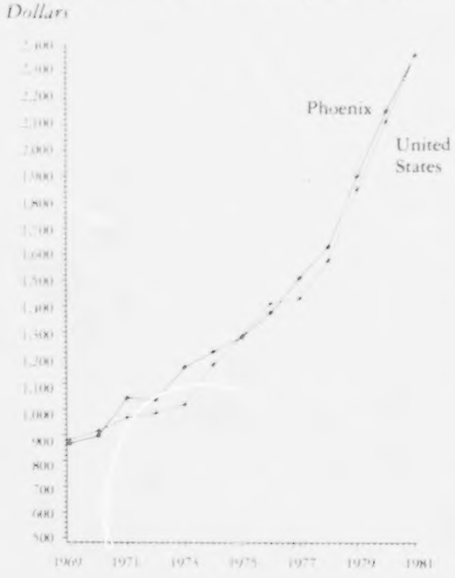


FIGURE V
TRANSPORTATION
(Phoenix Urban Family of Four)



Source: U.S. Urban Average, Bureau of Labor Statistics; Phoenix data compiled by the Bureau of Business and Economic Research, College of Business Administration, Arizona State University, in cosponsorship with Valley National Bank

FIGURE VI
CLOTHING AND PERSONAL CARE
(Phoenix Urban Family of Four)

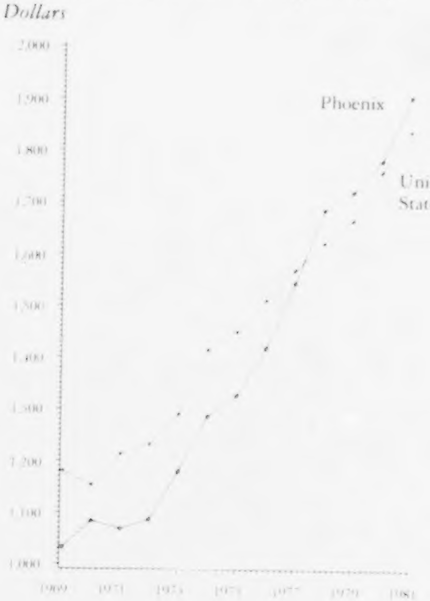


FIGURE VII
MEDICAL CARE
(Phoenix Urban Family of Four)

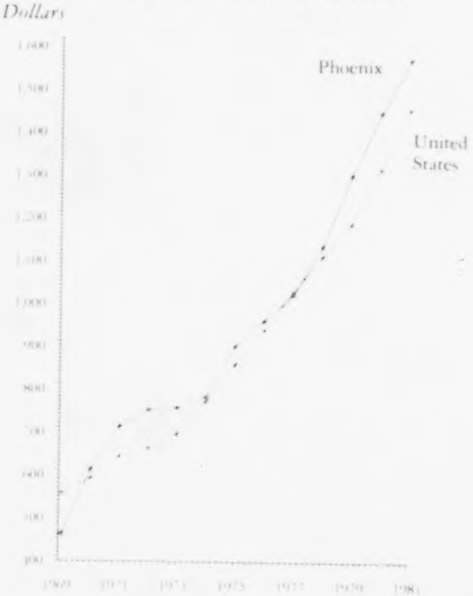


FIGURE VIII
OTHER FAMILY CONSUMPTION
Alcoholic Beverages, Tobacco Products,
Reading & Recreation
(Phoenix Urban Family of Four)

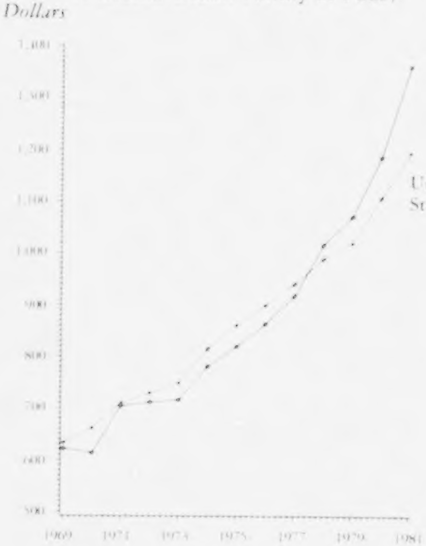
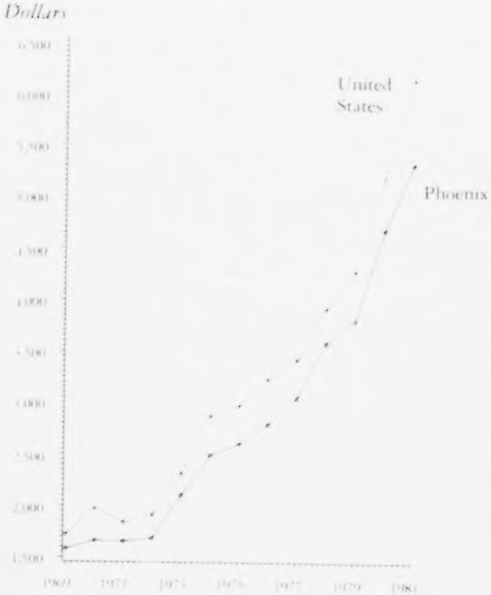


FIGURE IX
TAXES
(Phoenix Urban Family of Four)



Source: U.S. Urban Average, Bureau of Labor Statistics; Phoenix data compiled by the Bureau of Business and Economic Research, College of Business Administration, Arizona State University, in cosponsorship with Valley National Bank.

indexing the 1969 budget in addition to direct pricing is to provide data that can be compared with other cities. The breakdowns and percentage increase figures for the Phoenix area are presented in Table 3. The components of the budget as compared to the U.S. average budget are presented in Figure II thru IX.

For the Phoenix budget, the leading categories of increase include Other Family Consumption (14.8 percent), Taxes (13.7 percent), and Transportation (12.7 percent). Since these figures reflect the CPI increases, they differ somewhat from the increases of the directly priced components. Although the preceding discussion of categories in the budget generally applies to the indexed budget, there is one major difference: Over the years the BLS has updated and modified the items priced to determine the CPI. As consumption patterns change and new products enter the consumer market, the CPI is modified to reflect these changes.

Comparison to Other Cities

The indexed budget is developed using a methodology similar to that used by the BLS for other selected metropolitan areas. For 1981, the Phoenix budget amount of $25,015 ranked seventeenth between Los Angeles and Denver. The 1981 and 1969 budgets, as developed by the BLS, are presented and ranked in Table 4.

CONCLUSION

The BLS has announced that due to funding limitations and lack of consistency and accuracy for the Urban Family of Four Budget Studies, they will discontinue them effective with the 1981 reports. In the future the Bureau of Business and Economic Research expects to modify the type of data collected and extend the report to other cities to give Arizona residents some comparable cost of living figures.

TABLE 3

PHOENIX FAMILY OF FOUR AND
U.S. AVERAGE BUDGET COSTS
INDEXED BY THE CPI

	1981	*1980 (Revised)*	*Percent Change*	*U.S. Average*
TOTAL BUDGET	$25,015	$22,683	10.8	$25,407
TOTAL FAMILY CONSUMPTION	18,768	17,140	9.5	18,240
Food	5,828	5,481	6.3	5,843
Housing	5,743	5,098	12.7	5,546
Transportation	2,369	2,155	9.9	2,372
Clothing	1,330	1,224	8.7	1,333
Personal Care	577	560	1.9	508
Medical Care	1,558	1,434	8.6	1,443
Other Family Consumption [b]	1,364	1,188	14.8	1,196
OTHER COSTS [c]	918	858	7.0	1,021
TAXES	5,328	4,685	13.7	6,146
Social Security	1,663	1,390	19.6	1,703
Income Taxes	3,665	3,295	11.3	4,443

[a] United States Department of Labor, Bureau of Labor Statistics, USDL 82-139.

[b] Other Family Consumption includes reading, recreation, educational supplies, tobacco, alcoholic beverages and miscellaneous expenses.

[c] Other Costs include life insurance premiums, occupational expenses, and gifts and contributions.

NOTE: Details may not add to totals due to rounding.

Source: Bureau of Business and Economic Research, College of Business Administration, Arizona State University in cosponsorship with Valley National Bank.

TABLE 4

PHOENIX FAMILY OF FOUR BUDGET

Comparative Living Costs: 1969 and 1981
Metropolitan Phoenix and
Twenty-Four Other Metropolitan Areas

Area	*1969 Budget*	*1969 Rank*	*1981 Budget*	*1981 Rank*
Urban United States Average	$10,279		$25,407	
Honolulu	12,118	(1)	31,893	(1)
New York	[illegible]	(3)	29,540	(2)
Boston	[illegible]	(2)	29,213	(3)
Washington, D.C.	[illegible]	(10)	27,352	(4)
San Francisco	10,837	(4)	27,082	(5)
Milwaukee	10,739	(6)	26,875	(6)
Philadelphia	10,221	(12)	26,567	(7)
Buffalo	10,747	(5)	26,473	(8)
Seattle	10,555	(7)	25,881	(9)
Minneapolis-St. Paul	10,191	(13)	25,799	(10)
Cleveland	10,470	(8)	25,598	(11)
Cincinnati	9,736	(20)	25,475	(12)
Chicago	10,452	(9)	25,358	(13)
Detroit	9,949	(17)	25,208	(14)
Baltimore	9,898	(18)	25,114	(15)
Los Angeles	10,247	(11)	25,025	(16)
PHOENIX	9,731	(21)	25,015	(17)
Denver	9,737	(19)	24,820	(18)
San Diego	9,979	(16)	24,776	(19)
Pittsburgh	9,684	(22)	24,717	(20)
Kansas City	10,034	(14)	24,528	(21)
St. Louis	10,019	(15)	24,498	(22)
Houston	9,176	(24)	23,601	(23)
Atlanta	9,117	(25)	23,273	(24)
Dallas	9,340	(23)	22,678	(25)

Source: Bureau of Business and Economic Research, College of Business Administration, Arizona State University in cosponsorship with Valley National Bank

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[1] Bulletin 1570-5, "Three Standards of Living for an Urban Family of Four Persons," BLS, Spring, 1967.

[2] For the indexed budget the mortgage is assumed to be six-years old.

[3] Robert T. Keim, "Phoenix Cost of Living: An Evaluation and Comparison," *Arizona Business*, June/July, 1981, pp. 17-21.

[4] The Phoenix Area CPI is collected by the Bureau of Business and Economic Research, College of Business Administration, Arizona State University in cosponsorship with Valley National Bank and is reported quarterly.

The Equal Access to Justice Act: An Overview

JAN DONOVAN
DAVID KASUNIC

Legislation of special interest and potential benefit to the small business community was passed last year by the U.S. Congress. Known as the Equal Access to Justice Act,[1] it became effective on October 1, 1981. Over 51,000 Arizona businesses are potential benefactors of this act which was intended to correct an inequality called to Congress' attention by the 1980 White House Conference on Small Business. Justice has become very expensive for the average American, particularly when the opponent is the federal government which commands extensive resources and legal expertise. When the cost of contesting a government order or an unreasonable government regulation exceeds the amount at stake, a citizen or small business has no realistic choice but to settle, compromise or acquiesce.

THE NEED FOR THE LEGISLATION

Small business owners are no strangers to the legal world. Typically, attorneys are retained to draft and process incorporation documents and are often needed to assist with debt collections. Legal services are an expected cost when complex contracts, such as leases, mortgages and deeds, are involved. However, the small business usually does not have a law firm on retainer, and unexpected legal expenses can severely strain the company's budget.

The need to defend a lawsuit causes additional expenditures, regardless of the outcome. This is because the court system in the United States operates under what is known as the "American Rule," which means parties in a lawsuit pay their own attorney fees, no matter who wins, a concept unique to this country. In Europe, the English or Continental Rule dictates that the losing party is liable for at least a portion of the other party's attorney fees.

The American Rule was designed to ensure that parties could assert or protect their rights without fear of being penalized for their actions. A stated purpose is not to discourage or deter litigation. Although this rationale could be accepted if the parties were on equal footing, for many citizens, particularly in litigation with the government, the American Rule has had the opposite effect. The cost of litigation and the inability to recover attorney fees precluded resort to legal actions.

Because of the proliferation of federal rulemaking, particularly during the past decade, even the most conscientious business has difficulty complying with governmental rules and regulations. To ensure compliance, each federal agency hires inspectors, auditors, investigators, compliance officers and enforcement officials — all experts in their field. In addition, they have at their command more than 67,500 government

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The Equal Access to Justice Act attempts to balance the inequities between the federal government and small business. This act aims to make government agencies accountable by reimbursing attorney fees and other costs when the government fails to prove that its actions were substantially justified.

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attorneys, each a specialist in a narrow field of law.[2] Federal regulations pertaining to small business cover nearly 100,000 pages with annual changes that average over 87,000 pages, an average daily modification of 334 pages.[3] American businesses complete 305 million federal forms each year; over 7 billion questions, included on 850 million pages of the forms, are produced at a cost of ten billion dollars annually.[4]

The result has often been jargon, compromise and acquiescence by small business owners even when charges are without foundation. The costs of depositions, witness fees, travel to hearings (often in San Francisco or Washington, D.C.) must be borne by the business. When these are compounded with indirect expenses, such as time away from the business, it is easy to understand why it has been better to capitulate than fight. Sometimes governmental agencies charged small business precisely because their owners could not afford a court battle.[5] The result was that small businesses sometimes agreed to disadvantageous settlements because they could not afford to prove they were right.

Congress recognized that something was inherently wrong where, in a capitalistic society, government was making it so difficult for small businesses to prosper or even survive. The Equal Access to Justice Act is an attempt to balance the inequities between the federal government and small business. This act aims to make the government agencies accountable by reimbursing attorney fees and other costs when the government fails to prove that its actions were substantially justified.

WHO CAN CLAIM

The act authorizes claims by individuals whose net worth is less than $1 million or businesses whose net worth does not exceed $5 million and/or who have less than 500 employees.[6] Businesses of less than $5 million in net worth *and* with less than 500 employees can submit a claim in a governmental agency action. However, in courts of law the business must meet only one criteria. This seems to be a legislative oversight in wording; the congressional intent appears to require that administrative and judicial proceedings be treated identically and that both tests be met. Congress is now considering amendments which would correct this technicality and require both tests for eligibility. Tax exempt, charitable, educational or religious organizations and agricultural cooperatives with less than 500 employees are also eligible, regardless of their net worth.

Eligibility is determined as of the date the citation or charge is filed. If the citation was given before the effective date of the act, October 1, 1981, fees and expenses can be claimed if a final determination has not been made before that date. Similarly, recovery of attorney's fees and expenses for the entire litigation process is permitted if the legal proceeding started before the sunset date of September 30, 1984.

Net worth is not defined by the act, although proposed agency rules state that it can be based on acquisition costs or fair market value.[8] Presumably, if an entity has $500 million in assets and over $496 million in liabilities, it would still be eligible as long as fewer than 500 people were employed when the proceeding began. Proposed rules provide part-time employees to be included on a proportional basis. Sole owners of an unincorporated business must include both their personal and business assets under the proposed agency rules to qualify as an individual. An applicant's status as an individual or a sole owner of an unincorporated business is determined by the personal or business nature of the issues on which the applicant wins, rather than on all the issues in the lawsuit.

WHEN CAN A CLAIM BE MADE?

To be awarded costs and fees, the party, either as a plaintiff or a defendant, must have "prevailed" against the government in an "adversary adjudication." Included are all judicial proceedings (except tort actions, which are noncontractual wrongs), and agency actions in which the position of the United States is represented by counsel or otherwise.

Agency actions for granting or renewing licenses and fixing or establishing a rate are specifically excluded. Social Security claims are also exempted, except for those few ultimately determined in a judiciary action, because the administrative proceedings under the Social Security Act are not "adversary adjudications."[9]

Agencies are required to list the types of proceedings covered in their rules and make the initial determination if there is a dispute subject to possible judicial review. However, in view of the act's remedial purpose, the applicant should not have to demonstrate in each case that the proceeding is covered.

After resolving the coverage question, the next issue is, when does a party actually "prevail;" that is, when is the applicant entitled to seek compensation? While the definition of prevailing party has not been contested in court, congressional intent[10] seems to be that the phrase is not limited to a victor only after entry of a final judgment following a full trial. Nor are awards to be limited to a favorable decision by an administrative law judge, agency, department, or multidepartment review board or court. An award can be made where there has been a settlement or a dismissal, either voluntary or directed, in favor of a private party and even when the private party prevails on fewer than all the issues. A private party may also be entitled to a fee award before a final judgment in certain instances, such as an interim order which is central to the case or where an appeal made during the course of legal action is sufficiently significant or discrete to be treated as a separate unit.[11]

Whether a party has prevailed when separable claims are involved in one action would be determined on a case-by-case basis considering the significance, nature and relationship of the claims. It is readily apparent that Congress intended that the occasions where an award may be made should be broadly construed. For instance, if several claims arise from a single incident or set of facts and the government wins most of them, it may be determined that the private party did not prevail even though the government lost one or more additional claims. But if essentially unrelated claims of nearly equal significance are heard together for administrative convenience and a party prevails in only one and loses the others, the person may be eligible for an award for expenses and fees resulting from the successful claim.

Application for an award must be made within thirty days after final deposition of a proceeding and may also be made at any earlier time if the party has prevailed with respect to either the entire proceeding or to a significant side issue.

WHEN WILL A CLAIM BE DENIED?

The clear congressional intent of this act was that cost and fees should be awarded to an eligible private prevailing party in a civil dispute with the government unless the government can show that its action was "substantially justified" or that "special circumstances make an award unjust."[12] The law attempts to balance the executive branch's constitutional obligation to faithfully execute the laws in the public's interest with the vindication of private rights. The test of whether a government action was "substantially justified" is essentially one of reasonableness. If the government shows its case had a reasonable basis in fact and law, no award would be made.

Under the "substantially justified" benchmark, the government action is reviewed on the basis of the record without any presumption as to its appropriateness. Therefore, one could not assume that the government's position was not substantially justified simply because it lost the case. Nor should there be any presumption of reasonableness attached to the government's actions. The government does not need to establish that its decision to proceed was based on more than a reasonable possibility of prevailing. To ensure that agencies will not be deterred from going ahead in a case involving a close question of fact or law, Congress provided an additional "safety valve," indicating that the government should not be held liable where "special circumstances make an award unjust."[13] Courts can also deny an award where equitable considerations dictate it should not be made, such as when the private prevailing party causes an unwarranted delay.

However, some types of case dispositions may indicate that the government was not substantially justified. Courts should, therefore, examine cases where there has been a judgment on the pleadings, a directed verdict, or where a previous suit on the same claim was dismissed or lost on the merits. Congressional committees felt these cases clearly raise the possibility that the government was either unreasonable in pursuing the action or was attempting to find a court more amenable to its position.

Even though there is no presumption of reasonableness or unreasonableness as to government actions, Congress specified that the government has to carry the burden of proof.[14] This designation is consistent with the general tendency to place the burden on the party who has easier access to and knowledge of the facts in question. It is simpler for government, which controls the evidence regarding its actions, to prove it was reasonable than for the businessperson to prove the government acted unreasonably. Therefore, when applying for reimbursement, a prevailing private party need only allege that the agency's position was not substantially justified. The applicant does, however, have the burden of proving that he or she is entitled to recover fees under the act because as an individual his or her net worth is less than one million dollars or less than $5 million for a business.

WHAT MAY BE CLAIMED?

Awards should include the reasonable costs incurred in adequately preparing for and prosecuting a case. This includes reasonable fees for attorneys, expert witnesses, the cost of reports, studies or tests reasonably needed to support the private party's case.

Reimbursement for attorney's fees is based on the prevailing market rate for the kind and quality of services rendered. However, no attorney can be compensated at a rate in "excess of $75 per hour unless the agency involved has so provided by rule." Also, prevailing rates may be different for in-house attorney services than that for outside counsel. As legal rates vary in different localities, under the proposed agency rules each agency will establish its own standards for determining prevailing rates. Attorney's out-of-pocket expenses are also covered and the $75/hour ceiling on fees applies only to services of the attorney and not to overhead expenses and other costs connected with legal representation.[15] These expenses and paralegal costs may be charged as a separate item by the attorney if they are ordinarily billed that way to the attorney's clients.

Expert witnesses cannot be "compensated at a rate in excess of the highest rate of compensation for expert witnesses paid by the agency involved."[16] Generally a $24.09 per hour cap is set on expert witness fees, which is often woefully inadequate. Congress is currently considering amending this inequity and is also working to correct technicalities and clarify other confusing aspects of the act.

WHO WILL PAY THE CLAIM?

Testimony at hearings and congressional reports on various bills substantially identical to the act indicate an intent that all fees awarded should come from the budgets of departments whose actions are judged to be "not substantially justified." Not only would such fiscal responsibility make agencies and departments more accountable for their actions, but the impact of awards on their budgets would provide a quantitative measure of agency abuses and would allow congressional oversight of department and agency practices and regulations.[17]

Unfortunately, as written, the act's provisions as to how the payment of fees and expenses are to be processed are confusing. The act provides that fees and other expenses awarded in an agency action "*may* be paid by any agency over which the party prevailed from any funds made available to the agency by appropriation or otherwise; for such purposes. If not paid by any agency, the fees and other expenses shall be paid in the same manner as the payment of funds awarded final judgments made."[18] (emphasis added). Authorization was also given to appropriate to each agency "such sums as may be necessary to pay fees and other expenses awarded."[19] The General Judgment Fund, from which fees and expenses are usually reimbursed, is a continuing appropriation without limitation. However, another section of the act[20] states no awards can be made from the General Judgment Fund unless Congress makes specific authorization for that purpose. Since it is unclear whether the act obligates agencies to pay awards directly, and if Congress makes no specific appropriation to the General Judgment Fund, recipients of awards could be left without recourse — clearly contrary to congressional intent.

CONCLUSION

Testimony at Congressional hearings produced numerous examples of actions against small business owners that were indefensible.[21] The Equal Access to Justice Act represents a serious commitment encouraging entrepreneurship by discouraging reckless governmental intervention. It offers the strong possibility of some alleviation from irresponsible bureaucratic practices; it is not a guaranteed remedy, but, at least, the small business operator now has additional ammunition when weighing the feasibility of engaging the government in legal battle. Those who believe the regulator is acting dictatorily need not surrender because of economic weakness, but can consider the alternative recourse.

In deciding whether to litigate, the small businessperson must still, with the help of a lawyer, assess the risk and likelihood of not only prevailing on the merits, but also whether the government's action will be found to have been substantially justified. What constitutes a substantial justification will depend upon judicial interpretation. Until the issue is actually faced, it is an unknown quantity to the lawyer as well as the layman. Therefore, the small business owner should not take false hope for this law if the facts still suggest that settlement would be more advisable.

However, all businesses and individuals may benefit indirectly. The act's reporting procedures allow Congress to monitor agencies that waste taxpayer's money by instigating unjustified cases. To avoid potentially negative publicity, as well as the assessment of an award for fees, agency managers will more rigorously review each case to weed out potential losers. If the purpose of the act is accomplished, there should be no need for fee reimbursement since few cases resulting in an award, will be brought.

The Equal Access to Justice Act is a unique attempt at regulatory reform. Other legislative proposals to curb regulatory excesses involve congressional or executive review; the act provides for a discretionary review by the individual or business owner. It is a return to the traditional populist approach; the power to limit regulatory abuse is given the individual and small business.

NOTES

[1] Pub. L. No. 96-481, 94 Stat 2325, 5 U.S.C. Section 504 & 28 U.S.C. Sec. 2412.

[2] H.R. Rep. No. 96-1005 Pt. 1, 96th Cong. 2nd Sess., p. 8 (1980).

[3] Statement of Frank Swain, Chief Counsel for Advocacy, U.S. Small Business Administration. Before the Subcommittee on Export Opportunities and Special Small Business Problems Committee on Small Business, U.S. House of Representatives, October 7, 1981, p. 8. The authors requested information on current regulations affecting Small Business and was sent 15 lbs. of papers and document.

[4] Small Business Administration, Facts About Small Business and the U.S. Small Business Administration, February 1981, p. 21.

[5] S. Rep. No. 96-253, 96th Cong. 1st Sess., p. 5 (1979).

[6] Pub. L. No. 96-481, 94 Stat 2325, 5 U.S.C. Sec. 504 (b)(1)(B) and 28 U.S.C. Sec. 2412(d)(2)(B).

[7] 28 U.S.C. Sec. 2412.

[8] Each agency adopts its own rules, however, as uniform procedures for making awards are required, the Chairman of the Administrative Conference provided a set of model rules to provide guidance for the agencies in developing their own regulations. All references to agency rules are to these model rules provided by the U.S. Administration Conference. A copy of these model rules is found in Federal Regulations/Vol. 46, No. 122, Thursday, June 25, 1981, p. 32912.

[9] Letter from Peter W. Rodino, Jr., Chairman of House Committee on Judiciary to Thomas P. O'Neill, Jr., Speaker of House, dated Sept. 26, 1980. Hearings before Subcommittee on Courts, Civil Liberties and the Administration of Justice of the Committee on the Judiciary on S265, Award of Attorney's Fees Against the Federal Government, May 20, and June 24, 1980, serial No. 62, p. 595.

[10] The intent is that the interpretation of that term in the act is to be consistent with the law that has developed under existing laws. Prepared statement of Sen. Dennis DeConcini, Hearings before Subcommittee on Courts, Civil Liberties and Other Administration of Justice of the Committee on the Judiciary on S265, Award of Attorney's Fees Against Federal Government. May 20 and June 24, 1980 serial No. 62, p. 27.

[11] H.R. Rep. No. 96-1005 Pt. 1, 96th Cong. 2nd Sess., p. 9 (1980) S. Rep. No. 96-253, 96th Cong. 1st Sess., p. 7 (1979) and Sen. DeConcini's Statement, Supra.

[12] 5 U.S.C. Sec. 504(9)(1) and 28 U.S.C. Sec. 2412(d)(1)(A).

[13] 5 U.S.C. Sec. 504 (a)(1) and 28 U.S.C. Sec. 2412(d)(1)(A).

[14] S. Rep. No. 96-253, 96th Cong. 1st Sess., p. 6 (1979), Administrative Conference of U.S., Equal Access to Justice Act: Agency Implementation Federal Reg. Vol. 46, No. 122, Thursday, June 25, 1981 Notices p. 32904.

[15] H.R. Rep. No. 96-1418, 96th Cong. 2nd Sess. 15 (1980).

[16] 5 U.S.C. Sec. 504(b)(1)(A)(i).

[17] H.R. Rep. No. 96-1005, Pt. 1, 96th Cong. 2nd Sess. 11 (1980).

[18] 5 U.S.C. Sec. 504(d)(1).

[19] 5 U.S.C. Sec. 504(d)(2).

[20] Equal Access to Justice Act 1980, Pub. L. No. 96-481, Sec. 207, 94 Stat 2330.

[21] H.R. Rep. No. 96-1005 Pt. 1, 96th Cong. 2nd Sess., p. 6 (1980).

The Arizona Business Scene

An Inventory of Rural Land Use in Arizona

Although 75 percent of Arizona's 2.7 million people live in the state's two urban areas (metropolitan Phoenix and metropolitan Tucson), substantial residential development has also occurred in many rural areas throughout the state. An example of this development is the growth in the number of housing units across the state, as shown in Table 1. In addition, many areas of the state have been subdivided, although the majority of the land still remains vacant. This article summarizes a 1980 detailed geographic inventory of land use in the nonmetropolitan areas of Arizona.

TABLE 1

GROWTH IN THE NUMBER OF HOUSING UNITS IN ARIZONA AND ITS COUNTIES, 1970-1980

County	*Number Of Housing Units* *1970*	*1980*	*Percentage Change* *1970-1980*
Apache	9,036	18,872	108.9
Cochise	19,488	32,760	68.1
Coconino	14,808	30,285	104.5
Gila	11,131	18,756	68.5
Graham	4,868	7,405	52.1
Greenlee	3,532	4,342	22.9
Maricopa	320,030	610,002	90.6
Mohave	10,550	28,746	172.5
Navajo	13,894	28,430	104.6
Pima	118,623	218,601	84.3
Pinal	19,837	34,080	71.8
Santa Cruz	4,280	6,402	49.6
Yavapai	16,221	33,759	108.1
Yuma	19,453	37,501	92.8
STATE TOTAL	585,751	1,109,941	89.5

Source: U.S. Bureau of the Census, *Census of Population and Housing*, 1980, Advance Reports, PHC80-V-4-Arizona, March 1981.

The geographic inventory was compiled through the use of the 1980 property tax records from the fourteen counties of the state. The entire state was incorporated in this inventory with the exception of the Tucson and Phoenix urban areas and the western nonmetropolitan region of Maricopa County. Within this overall study area however, certain nonprivate lands are not included in county property tax records, such as Indian reservations, military reservations, and wildlife refuges.

By examining the property use code for each land parcel included in the tax records, it was possible to identify the extent of development/use of each parcel. Each land parcel was classified by these use codes into the following categories: (1) vacant land; (2) single family residence; (3) mobile homes; (4) multifamily residence; (5) retail store; (6) automotive-related commercial; (7) restaurant; (8) commercial, other than retail, automotive, restaurant; (9) industrial; (10) farm and ranch; (11) mining; (12) government use; (13) all else.

An analysis of Table 2 reveals some major differences in land use across Arizona's nonmetropolitan counties. Vacant land is much more abundant in some counties than others, given the county's size, as measured both by off-reservation population and by total number of non-vacant parcels of land. For example, Apache and Mohave counties have large numbers of vacant parcels, while Graham and Greenlee counties have relatively few vacant parcels.

Residential land use also varies by county, particularly in the number of mobile homes. Mohave County has nearly as many mobile homes as single-family houses; Navajo County also has a disproportionately large number of mobile homes. In contrast, Santa Cruz County has very few mobile homes, but has a comparatively large number of multifamily dwellings. Greenlee County has very few multifamily dwellings.

Commercial land use is generally constant by county given county size. Gila County has the greatest proportion of commercial land parcels and the nonmetropolitan portion of Pima County the least. Industrial land use does vary by county, with the heaviest proportion in Cochise and Santa Cruz counties.

The other land use categories also vary by county. Farms and ranches are most numerous in Eastern Arizona in Greenlee, Graham, and Apache counties. The northeast portion of Maricopa County and Gila County, both predominantly National Forest, have the fewest number of ranches and farms. The use of land parcels for mining is relatively common in Gila and Greenlee counties but nonexistent in other counties. Government use of land (federal, state, county, municipal) is heaviest in Navajo, Yuma, and Greenlee counties and proportionately the least in Santa Cruz County.

It is possible to update these 1980 land use data with the number of building permits issued in 1980 and 1981, as shown in Table 3. The number of building permits by county and by use category provides only an estimate as to how the data in Table 2 has changed in the last two years. Not all building permits result in construction, and some of the new construction from the 1980 and 1981 building permits may have occurred on land parcels that were already occupied.

Despite weak economic conditions in 1980 and 1981, a large number of building permits were issued in Arizona's nonmetropolitan counties. The two-year growth, measured as a percentage of the nonvacant parcels in 1980, was quite impressive in some counties: Yavapai County grew 16.8 percent, Mohave County grew 14.2 percent, and Coconino County grew 12.7 percent. Greenlee County had the slowest rate of growth, only 1.3 percent over the past two years. The growth in Yavapai County and in Coconino County during this period has occurred in virtually all categories of land use. Mohave County's growth has been primarily residential and retail stores.

Further information on the 1980 Arizona land use is available in a report titled "Rural Land Use in Arizona: An Inventory," available from the Bureau of Business and Economic Research. The information in this report is similar to that presented in Table 2, except it is presented for more detailed geographic areas within

TABLE 2

RURAL LAND USE BY CATEGORY AND COUNTY

County	*Vacant Land*	*Single Family*	*Mobile Home*	*Multi Family*	*Retail Store*	*Automotive*	*Restaurant*	*Other Commercial*	*Industrial*	*Farm & Ranch*	*Mining*	*Government*	*All Else*	*Total Nonvacant*
Apache	57,406	5,272	692	113	65	49	21	191	28	826	0	116	298	5,671
Cochise	70,266	16,752	3,022	696	550	242	151	841	110	2,719	93	1,405	1,965	28,328
Coconino	29,069	11,793	2,982	806	365	190	105	704	194	611	0	395	665	18,711
Gila	10,088	9,769	2,655	515	200	87	98	918	52	290	425	558	900	16,227
Graham	5,608	3,947	1,305	227	196	60	57	141	61	1,254	38	227	419	7,912
Greenlee	1,097	1,085	380	28	45	11	7	70	10	525	79	300	135	2,679
Maricopa [a]	12,989	5,468	207	52	55	8	12	161	7	47	0	174	486	4,652
Mohave	173,376	15,003	12,080	571	351	177	118	894	102	1,088	233	410	478	29,511
Navajo	42,525	10,614	4,550	548	515	186	112	410	79	544	42	2,029	658	19,887
Pima [b]	21,784	20,504	7,744	109	110	33	52	525	158	1,480	459	895	10,406	42,455
Pinal	60,410	15,590	5,312	878	385	190	158	667	164	3,649	141	1,029	1,037	28,209
Santa Cruz	30,834	3,949	238	400	152	54	27	211	146	401	15	100	252	5,925
Yavapai	48,965	15,510	3,521	649	574	121	92	987	76	1,117	171	397	1,192	22,207
Yuma	21,445	14,965	6,608	1,130	763	266	154	545	571	3,260	169	3,590	791	32,610
STATE TOTAL	563,922	142,199	51,108	6,722	3,607	1,658	1,124	7,263	1,558	16,771	1,867	11,425	19,682	264,984

[a] Includes only the northeast portion of Maricopa County

[b] Excludes the Tucson metropolitan area

Source: Arizona Department of Revenue, property tax records, compiled by the Bureau of Business and Economic Research, College of Business Administration, Arizona State University each county. The detailed geographic unit used to compile this inventory within each county is that used in property tax records. These property tax "books" are geographic areas that vary widely in shape and size. Because the geography of these book areas within each county is foreign to most people, maps defining these book locations in each of the fourteen counties are included in the report.

TABLE 3

BUILDING PERMITS ISSUED FOR THE CONSTRUCTION OF NEW BUILDINGS, 1980-1981

County	*Single Family*	*Mobile Home*	*Multi Family*	*Retail Stores*	*Automotive*	*Other Commercial*	*Industrial*	*All Else*	*Total*
Apache	242	23	8	18	1	12	4	1	309
Cochise	858	491	5	82	10	30	12	15	1,503
Coconino	1,340	781	81	77	3	57	17	11	2,367
Gila	730	361	15	23	5	38	9	18	1,199
Graham	176	306	5	21	2	58	4	11	583
Greenlee	32	1	0	0	0	1	1	0	35
Mohave	1,681	2,145	65	265	0	26	6	17	4,205
Navajo	977	476	7	56	13	27	29	8	1,593
Pinal	952	1,307	64	26	15	40	18	10	2,432
Santa Cruz	232	10	6	5	0	4	5	2	264
Yavapai	2,121	1,191	104	107	17	111	34	56	3,741
Yuma	895	1,157	79	65	5	51	19	22	2,293
TOTAL of nonmetropolitan counties	10,236	8,249	439	745	71	455	158	171	20,524

Source: Bureau of Business and Economic Research, College of Business Administration, Arizona State University

A Survey of Arizona Business Conditions

HAROLD FEARON

The Arizona economy showed no sign of the long anticipated recovery in either June or July and dropped to even lower levels, according to results from the monthly business survey of the Purchasing Management Association of Arizona and the Purchasing Management Association of Southern Arizona. The July drop in economic activity was a repeat of the previous month, with inventory levels of purchased materials, new orders received, production, and employment all registering major declines. By now the stimulating effects of the downward trend in inventory levels, the decrease in personal tax rates, the increase in Social Security payouts, and the slight drop in interest rates should be showing up, but the economic indicators show that the downhill slide has not yet been reversed.

The purchasing business survey now is in its twentieth year of consecutive monthly reporting on the current status of the Arizona economy. Data are gathered through a questionnaire sent at the close of each month to purchasing managers throughout the state, asking them to indicate the direction of activity — higher, unchanged, or lower — on six key indicators of economic activity in the month just ended. Since these purchasing managers deal daily with the forces of supply and demand, they are able to provide timely and accurate information on current business trends, which enables economic turning points to be spotted.

Prices paid for major purchased items were essentially unchanged again in June and July; July was the fifth consecutive month of level prices. Higher prices were reported by 24 percent of the firms; 56 percent said prices were unchanged; and 20 percent said they paid lower prices in July than in June. Without question, the monotonous increase in prices, which began in 1975, has been reversed, and relatively stable price levels now have been achieved, although at the cost of a major recession. When the recovery does begin, the absence of inflation should permit a more orderly upswing.

Delivery time on shipments from vendors saw another slight decline in July, similar to June's marginal decrease, and the ninth in a row. Nineteen percent of the purchasing managers got slower deliveries in July than in June, compared to an almost equal 20 percent reporting faster delivery service. The small net declines of the past three months follow large declines in December through April, and probably indicate that vendor order books are firming and that the Arizona economy may be near the bottom of the downswing.

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Inventory levels of purchased materials registered another extremely large drop in July, with higher inventory reported by only 14 percent while 56 percent cut stocks. This was the largest one-month drop in over seven years (since April of 1975). Major inventory reductions have occurred for seventeen consecutive months. The relatively low inventory levels should be causing Arizona firms to begin increasing production to meet current demand, but there is no sign that this is occurring yet. However, when the turn does appear, the need to build up stocks should provide a real stimulus to growth.

New orders received from customers fell again in July, for the twelfth consecutive month, and at the same rate as in June. Twenty-four percent of the firms booked more new business in July than in June, but nearly double that percentage, 46 percent, saw their order books shrink.

Production fell again in July, and at a very large rate, as Arizona firms continue to trim output in the face of the sagging new order rate. This was the tenth consecutive monthly decline, with higher production reported by only 19 percent of the firms, while twice that percentage, 42 percent, cut output.

Employment continued to fall, for the fourteenth month in a row. Only 12 percent added to their work force, but a very large 46 percent pared payrolls. While the July decrease rate was a bit less than in the previous month, it still is indicative of how deeply the current recession has cut into the Arizona economy.

Thus, the recession continued into the summer at a very fast pace. The extent and duration of the downswing has surprised most observers, and no signs yet are evident of the beginning of a recovery. The results of the June survey are shown in Table 1. The results of the July survey are shown in Table 2.

TABLE 1

JUNE PURCHASING SURVEY

	Percent of Purchasing Managers Indicating Each Response (June compared to May)		
Key Indicator	*Higher*	*Same*	*Lower*
Prices paid for major commodities	23	56	21
Delivery time from vendors	23	52	25
Purchased materials inventory level	15	30	55
New orders received	24	29	47
Production	21	36	43
Employment	11	39	50

Source: Purchasing Management Association of Arizona, and the Purchasing Management Association of Southern Arizona.

TABLE 2

JULY PURCHASING SURVEY

	Percent of Purchasing Managers Indicating Each Response (July compared to June)		
Key Indicator	*Higher*	*Same*	*Lower*
Prices paid for major commodities	24	56	20
Delivery time from vendors	19	61	20
Purchased materials inventory level	14	30	56
New orders received	24	30	46
Production	19	39	42
Employment	12	42	46

Source: Purchasing Management Association of Arizona, and the Purchasing Management Association of Southern Arizona.

Arizona Construction Activity

JAY Q. BUTLER

FIRST AND SECOND QUARTERS

Construction activity continued on a stable pattern of moderate upward movement through the first half of 1982. Given the level of interest rates and the weak economy that existed, any upward movement must be viewed as a positive indicator. The events of late August with declining interest rates and reduced inflation provide hope for the long expected construction recovery.

Total construction activity for the state during the first half of 1982 was 38,276 permits valued over $1.1 billion. While this is below the 47,589 permits worth $1.4 billion a year ago, it is above the 35,014 permits valued at $1 billion recorded during the last half of 1981. The upward movement was evident during 1982 with the first quarter reporting 17,732 permits at $497 million and the second quarter having 20,544 permits worth $566 million. Specific areas of construction activity are reported in Tables 1 and 2; the quarterly building permit tables are at the end of this report.

Residential Sector

Maricopa County. Tables 1 and 2 show that single-family construction activity has been slowly moving up since the third quarter of 1981 in which 2,102 single family permits worth $100 million were recorded. Nine months later, activity had increased to the current level of 3,003 permits valued at $124 million. The highest point of recent activity occurred in the second quarter of 1981 with 4,603 permits at $214 million recorded. Unfortunately, the motivating force was not economic. Rather, the increase was due to a desire to obtain permits before certain cities increased their development fees.

Mortgage interest rates continued at record levels of over 17 percent throughout the first half of 1982. Only through the use of innovative financing such as interest buydown mortgages and rapid payoff mortgages have builders been able to maintain a market. Approximately 300 new homes were sold per month during the first quarter but sales increased to around 500 new homes per month during the second quarter. While the sales and construction activity is not very vigorous, it does demonstrate the underlying strength of the residential market.

All Other Arizona Counties. Pima County has also shown a very stable pattern of single-family construction activity during the first half of 1982 (see Tables 1 and 2). While this is strong improvement over the fourth quarter (384 permits at $22 million), it is still not comparable to the levels of activity achieved during the first quarter of 1981.

The upward movement was also evident in the nonmetropolitan counties. The increase in single-family activity from the first quarter was especially evident in Apache (23 to 60 permits), Coconino (61 to 165

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permits), Gila (57 to 78 permits), Navajo (38 to 161 permits), and Yuma (43 to 87 permits). Only Mohave (129 to 119 permits) and Yavapai (242 to 195 permits) counties reported declines. While lower interest rates will result in a housing recovery for the metropolitan counties, economic improvement, especially in the copper industry, will have to be more evident before a sustaining recovery exists in the nonmetropolitan counties.

Commercial Sector

Maricopa County. The multifamily sector (5 or more housing units—apartments) has been very important in the recent improvement in the national housing market. Although construction activity is increasing, vacancy rates have also been increasing due to reduced demand resulting from lower in-migration, doubling up of households, and the summer exodus of winter residents and college students. It is not unusual to see the vacancy rate increase during the second quarter but begin to decline during the third and fourth quarters. It will be interesting to see if the historical trend continues, for that would sound a very positive note for the residential market.

After record levels of activity, the office building sector has reduced activity in response to a limited market. High vacancy rates have been reported in the suburban areas. Because of the weak economy and increasing business failures, firms have been very reluctant to expand or move to new offices. Given the overall desirability of the metropolitan area, the office building sector should again have increased activity in response to a strengthening business climate.

The retail sector continues to be depressed by lower consumer activity and limited new market areas. This sector will probably not have sustained growth until the residential market expands opening up new trade areas.

All Other Arizona Counties. Pima County has produced a pattern of commercial construction fairly similar to Maricopa County. The multifamily sector has

TABLE 1

ARIZONA CONSTRUCTION ACTIVITY
(Current Quarter, Previous Quarter, and One Year Ago)

	SINGLE FAMILY		COMMERCIAL						INDUSTRIAL	
			APARTMENTS		OFFICE BUILDINGS		RETAIL STORES			
	Number of Permits	Dollar Value	Number of Permits	Dollar Value	Number of Permits	Dollar Value	Number of Permits	Dollar Value	Number of Permits	Dollar Value
MARICOPA COUNTY										
First Quarter 1982	2,303	104,336,988	89	19,947,217	61	37,776,714	92	29,399,540	102	36,119,505
First Quarter 1981	3,698	164,882,153	112	47,391,140	69	20,775,857	108	24,167,645	117	32,689,989
Fourth Quarter 1981	1,875	85,668,985	47	11071,859	79	42,695,150	96	16,433,554	145	39,661,050
PIMA COUNTY										
First Quarter 1982	515	28,477,711	12	22,296,683	12	4,960,480	20	6,379,662	7	4,757,080
First Quarter 1981	774	41,275,104	14	17,182,830	57	104,482,000	38	7,913,953	6	466,125
Fourth Quarter 1981	384	22,189,145	10	4,161,010	44	4,498,032	36	8,853,700	2	134,100
REST-OF-ARIZONA										
First Quarter 1982	825	38,045,195	15	5,606,469	21	1,535,702	82	10,239,679	6	173,000
First Quarter 1981	1,118	45,075,084	12	10,090,117	25	1,157,443	81	4,421,244	22	1,485,562
Fourth Quarter 1981	944	38,333,169	7	3,158,150	30	3,196,721	98	11,102,239	25	2,079,004
ARIZONA TOTAL										
First Quarter 1982	3,643	170,859,894	116	47,850,369	94	44,272,896	194	46,018,881	115	41,049,585
First Quarter 1981	5,590	251,232,341	138	74,664,447	151	126,415,300	227	36,502,842	145	34,641,676
Fourth Quarter 1981	3,201	146,191,299	64	18,391,019	153	50,389,903	230	36,389,493	172	41,874,154

Five or more housing units

Office, bank, medical, and professional buildings

Shopping centers and other mercantile buildings

Source: Bureau of Business and Economic Research, College of Business Administration, Arizona State University

TABLE 2

ARIZONA CONSTRUCTION ACTIVITY

(Current Quarter, Previous Quarter, and One Year Ago)

			COMMERCIAL							
	SINGLE FAMILY		*APARTMENTS*		*OFFICE BUILDINGS*		*RETAIL STORES*		*INDUSTRIAL*	
	Number of Permits	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*
MARICOPA COUNTY										
Second Quarter 1982	3,003	123,880,790	96	23,180,747	61	37,356,458	75	21,780,144	117	22,287,969
Second Quarter 1981	4,603	213,586,214	118	125,933,675	80	39,522,246	125	30,441,995	134	28,518,419
First Quarter 1982	2,303	104,536,988	89	19,947,217	61	37,776,714	92	29,399,540	102	36,119,505
PIMA COUNTY										
Second Quarter 1982	510	30,472,676	14	19,000,785	29	12,924,999	24	5,263,572	4	3,100,000
Second Quarter 1981	625	37,269,546	15	9,323,795	37	9,253,818	54	23,089,636	3	188,800
First Quarter 1982	515	28,477,711	12	22,296,683	12	4,960,480	20	6,379,662	7	4,757,080
REST OF ARIZONA										
Second Quarter 1982	1,045	41,452,647	21	7,377,363	24	1,280,066	99	16,752,838	30	9,407,007
Second Quarter 1981	1,485	63,260,383	19	5,691,286	47	3,907,235	104	4,891,471	20	1,855,353
First Quarter 1982	825	38,045,195	15	5,606,469	21	1,535,702	82	10,239,679	6	173,000
ARIZONA TOTAL										
Second Quarter 1982	4,567	195,786,113	131	49,558,895	114	51,561,503	198	43,796,554	151	34,794,976
Second Quarter 1981	6,713	314,116,143	152	140,948,756	164	52,683,299	283	58,423,102	157	30,562,572
First Quarter 1982	3,643	170,859,894	116	47,850,369	94	44,272,896	194	46,018,881	115	41,049,585

Five or more housing units

Office, bank, medical, and professional buildings

Shopping centers and other mercantile buildings

Source: Bureau of Business and Economic Research, College of Business Administration, Arizona State University

had a stable pattern while the office market has had some improvement over the past few quarters.

Multifamily housing has been expanding in the nonmetropolitan counties in response to limited housing availability. The retail sector has been particularly strong as various retail firms work to meet the unsatisfied demand of the smaller communities. Continued expansion of the retail sector is dependent on these areas developing a solid growing economic base.

Industrial Sector

Maricopa County. Much like the office market sector, the industrial sector has been steadily declining from record levels of activity. However, existing activity is still fairly strong, especially in Tempe, which recorded 115 permits worth over $26 million during the first half of 1982. The industrial sector has also been expanding in Mesa with 18 permits at $14 million reported so far in 1982, compared to the 16 permits worth $7 million in the same period of 1981. As the economy recovers, the industrial sector should again expand rapidly, especially in Mesa, Chandler, and the northern areas of Phoenix.

All Other Arizona Counties. With the exception of Pima County, the industrial base is very limited in other counties. Flagstaff reported 4 permits worth $6.5 million (a warehouse/distribution center) while Graham County registered a $1.8 million cottin gin. The continued expansion of this sector, however, is fundamental to the economic development of the nonmetropolitan counties.

LOOKING AHEAD

Given the seriousness of the economic events over the past few years, the reported activity demonstrates the fundamental strength of the Arizona real estate market. A sustained recovery, however, is tied to the rejuvenation of the economy. Basically, economic revitalization is dependent on lower interest rates, declining inflation, and renewed business and consumer confidence.

Real estate activity and economic conditions remain tentative through the third quarter. The market has not been strong enough or consistent enough to maintain long-term stability. The impact of the recession is being felt throughout Arizona because of mining shutdowns and construction layoffs. In Maricopa County, the high technology industries and service industries have been less affected by the recession. The longer the national economy remains down, however, the greater is the likelihood that the local economy will weaken.

Beginning in August, interest rates moved rapidly downward, adding a hopeful note to economic recovery. The movement was initially led by short-term instruments but long-term rates have also begun to move. The FHA/VA mortgage interest rate was reduced to 14 percent from 15 percent. However, mortgage interest rates will have to decline further and remain down to provide for a sustained recovery.

In the past, interest rates have declined, only to rise again to record levels in a short period of time. The volatility of interest rates is as economically damaging as the level. But there is now a reasonable prospect for a significant and continuing reduction in interest rates. The main key is that the Federal Reserve appears to be relaxing its rigid policy of restricting the money supply. The goal of reducing inflation appears to be achieved at this time. Because of the reported drops in the money supply and the concern over restricting the economic recovery, the Federal Reserve seems to be easing credit conditions through a lower discount rate.

While this is good news, it is too early to determine whether it will continue. Similar events occurred early in 1982, but concerns over the deficit drove rates back up. The chief concern is what will happen when business loan demand, stemming from recovery, collides with the increasing borrowing demands of government. The competition for limited investment funds or renewed inflation could lead again, to higher interest rates.

Although lower interest rates are important, another element in the real estate recovery is renewed business and consumer confidence to make major real estate investments. Because of economic uncertainty and high unemployment, consumer confidence was falling during June and August. While the costs of acquiring a home are declining, the consumers must be more confident about their economic futures before they will make a major purchase. Economic recovery is needed to increase consumer confidence and employment, which will then stimulate the residential market. Similar events are needed to increase business confidence to stimulate commercial and industrial growth.

While declining interest rates and lower inflation are good signs, there has not been enough time to determine whether they will continue and lead to economic growth. Due to the absence of long-run trends, it is very difficult to forecast the timing of recovery. The consensus appears to be that the recovery will be below average in strength and gain momentum slowly. Since the timing of economic recovery is still fairly uncertain, the real estate recovery cannot be determined with any accuracy. In response to the positive economic news of the last few weeks, the long expected real estate recovery could be beginning but the market will be slow and inconsistent before the sustained recovery is established.

Arizona Building Permits: Quarterly Report

FIRST QUARTER, 1982

	*RESIDENTIAL**		*COMMERCIAL*		*INDUSTRIAL*		*OTHER*		*TOTAL*	
	Number of Permits	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*
APACHE COUNTY	31	412,485	1	1,000	—	—	6	91,000	38	504,485
Eager	7	213,000	1	1,000	—	—	4	86,000	12	300,000
St. Johns	9	—	—	—	—	—	1	—	10	—
Springerville	4	—	—	—	—	—	—	—	4	—
Unincorporated	11	199,485	—	—	—	—	1	5,000	12	204,485
COCHISE COUNTY	260	3,937,759	17	4,472,400	—	—	244	770,111	521	9,180,270
Benson	11	95,750	1	4,000	—	—	20	26,890	32	126,640
Bisbee	13	40,500	—	—	—	—	2	2,200	15	42,700
Douglas	27	156,108	1	3,000	—	—	30	137,732	58	296,840
Huachuca City	24	16,544	—	—	—	—	2	4,205	26	20,749
Sierra Vista	50	1,073,133	5	1,075,900	—	—	139	327,930	194	2,476,963
Tombstone	3	1,000	—	—	—	—	9	5,570	12	6,570
Unincorporated	101	2,378,124	6	3,382,000	—	—	31	245,484	138	6,005,608
Willcox	31	176,600	4	7,500	—	—	11	20,100	46	204,200
COCONINO COUNTY	175	4,766,072	25	2,744,235	—	—	103	255,508	303	7,765,815
Flagstaff	55	2,051,524	20	1,878,880	—	—	64	126,962	139	4,057,366
Fredonia	6	81,500	—	—	—	—	—	—	6	81,500
Page	32	70,628	—	—	—	—	5	28,000	37	98,628
Unincorporated	79	2,535,220	5	865,355	—	—	8	87,716	92	3,488,291
Williams	3	27,200	—	—	—	—	26	12,830	29	40,030
GILA COUNTY	147	1,900,364	5	107,296	1	7,680	50	671,195	203	2,686,535
Globe	8	46,800	—	—	—	—	11	22,900	19	69,700
Hayden	2	1,000	—	—	—	—	5	31,480	7	32,480
Miami	11	71,500	—	—	—	—	1	1,200	12	72,700
Payson	58	486,601	2	63,296	1	7,680	18	57,215	79	614,792
Unincorporated	68	1,294,463	3	44,000	—	—	15	558,400	86	1,896,863
GRAHAM COUNTY	93	950,043	8	263,200	—	—	15	287,748	116	1,500,991
Pima	15	66,931	—	—	—	—	7	8,198	22	75,129
Safford	18	96,361	7	223,200	—	—	7	29,550	32	349,111
Thatcher	19	382,100	—	—	—	—	—	—	19	382,100
Unincorporated	41	404,651	1	40,000	—	—	1	250,000	43	694,651
GREENLEE COUNTY	5	30,000	—	—	—	—	—	—	5	30,000
Clifton	4	—	—	—	—	—	—	—	4	—
Duncan	—	—	—	—	—	—	—	—	—	—
Unincorporated	1	30,000	—	—	—	—	—	—	1	30,000
MARICOPA COUNTY	4,893	116,943,788	438	107,648,242	102	36,119,505	4,305	49,622,912	9,738	310,334,447
Avondale	3	164,000	3	2,100	—	—	40	48,437	46	214,537
Buckeye	8	11,500	—	—	—	—	1	1,000	9	12,500
Chandler	293	6,018,056	3	260,400	—	—	405	2,498,077	701	8,776,533
El Mirage	9	16,360	1	600	1	186,000	8	99,775	19	302,735
Gila Bend	2	1,500	1	2,000	—	—	3	2,500	6	6,000
Gilbert	28	1,226,306	6	541,411	—	—	12	1,063,329	46	2,831,046
Glendale	347	5,116,886	25	12,470,000	4	737,000	462	1,342,215	836	19,666,101
Goodyear	11	26,764	—	—	1	19,000	21	46,086	33	91,850
Guadalupe	15	200,746	—	—	—	—	—	—	15	200,746
Mesa	365	10,206,436	28	11,470,410	10	12,988,387	910	5,644,190	1,313	40,309,423
Paradise Valley	50	2,760,340	—	—	—	—	65	500,507	115	3,260,847
Peoria	118	2,114,884	10	1,402,731	—	—	110	120,095	238	3,637,710
Phoenix	1,709	40,391,079	167	45,655,970	40	9,601,318	1,335	22,248,842	3,251	117,897,209
Scottsdale	274	14,511,053	42	14,259,094	1	208,400	364	6,635,340	681	35,613,887
Surprise	13	176,667	—	—	1	45,000	13	109,689	27	331,356
Tempe	256	7,537,700	81	9,855,200	41	11,625,400	153	2,166,500	511	31,184,800
Tolleson	24	52,926	—	—	2	110,000	6	2,100	32	165,026
Unincorporated	1,346	26,210,071	71	11,641,326	1	599,000	374	7,058,858	1,792	45,509,255
Wickenburg	2	84,000	2	87,000	—	—	—	—	4	171,000
Youngtown	40	116,514	—	—	—	—	23	35,372	63	151,886

Arizona Building Permits: Quarterly Report (Continued)

FIRST QUARTER, 1982

	*RESIDENTIAL**		*COMMERCIAL*		*INDUSTRIAL*		*OTHER*		*TOTAL*	
	Number of Permits	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*
MOHAVE COUNTY	721	8,944,556	57	7,954,919	—	—	701	3,203,859	1,479	20,103,334
Kingman City	48	644,422	12	2,690,198	—	—	14	13,879	74	3,348,499
Kingman Area	134	1,315,534	13	370,776	—	—	124	203,429	271	1,889,739
Lake Havasu City	102	2,438,221	14	3,192,249	—	—	53	2,294,318	169	7,924,788
Lake Havasu Area	18	119,670	1	116,640	—	—	23	34,120	42	270,430
Mohave Valley N.	197	2,206,225	13	1,447,560	—	—	273	344,397	483	3,998,182
Mohave Valley S.	158	1,425,234	2	98,040	—	—	163	224,865	323	1,748,139
Dolan Springs	27	332,864	—	—	—	—	21	56,721	48	389,585
Sacramento Valley	26	250,652	1	36,000	—	—	20	14,018	47	300,670
Mohave General	11	211,734	1	3,456	—	—	10	18,112	22	233,302
NAVAJO COUNTY	100	1,780,032	6	746,320	1	12,000	36	466,935	143	3,005,287
Holbrook	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Show Low	11	179,763	—	—	1	12,000	9	76,520	21	268,283
Snowflake	5	—	—	—	—	—	—	—	5	—
Taylor	7	204,500	—	—	—	—	1	800	8	205,300
Unincorporated	68	1,266,269	3	112,320	—	—	12	312,265	83	1,690,854
Winslow	8	127,500	1	600,000	—	—	6	62,350	15	789,850
PIMA COUNTY	1,805	33,419,943	57	34,637,581	7	4,757,080	1,294	23,907,130	3,163	96,721,734
Marana	2	—	1	—	—	—	—	—	3	—
Oro Valley	1	1,000	2	54,000	2	264,480	15	316,330	20	635,810
South Tucson	28	35,790	1	79,000	—	—	21	1,558,195	50	1,672,985
Tucson	729	9,388,453	45	29,538,381	3	347,000	552	10,000,905	1,329	49,274,739
Unincorporated	1,045	23,994,700	8	4,966,200	2	4,145,600	706	12,031,700	1,761	45,138,200
PINAL COUNTY	457	11,271,276	32	5,276,020	—	—	209	1,426,715	678	17,974,011
Apache Junction	153	2,843,448	19	3,112,424	—	—	122	248,920	294	6,204,792
Casa Grande	25	579,855	4	1,526,596	—	—	11	786,783	40	2,893,234
Coolidge	55	197,429	—	—	—	—	12	7,650	67	205,079
Eloy	7	190,200	1	20,000	—	—	2	300,500	10	510,700
Florence	6	67,850	2	200,000	—	—	2	1,000	10	268,850
Kearny	6	18,839	1	36,000	—	—	2	2,000	9	56,839
Mammoth	4	—	1	55,000	—	—	—	—	5	55,000
Superior	12	126,095	1	2,500	—	—	10	3,897	23	132,492
Unincorporated	169	7,247,560	3	323,500	—	—	48	75,965	220	7,647,025
SANTA CRUZ COUNTY	28	972,818	8	322,500	2	117,200	8	61,127	46	1,473,645
Nogales	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Patagonia	1	30,000	—	—	—	—	2	450	3	30,450
Unincorporated	20	898,400	1	11,500	1	1,200	6	60,677	28	971,777
YAVAPAI COUNTY	538	13,482,211	40	2,171,583	1	29,000	193	1,021,621	772	16,704,215
Chino Valley	25	401,514	3	83,000	—	—	8	10,200	36	494,714
Clarkdale	12	326,173	—	—	—	—	1	500	13	326,673
Cottonwood	28	220,183	7	278,392	—	—	6	33,562	41	532,137
Jerome	4	3,697	4	37,425	—	—	1	300	9	41,422
Prescott	81	2,025,103	2	16,060	—	—	120	538,302	203	2,579,465
Prescott Valley	63	984,070	6	394,906	—	—	1	72,960	70	1,451,936
Unincorporated	325	9,521,471	18	1,361,600	1	29,000	56	365,797	400	11,277,868
YUMA COUNTY	391	6,424,144	14	1,887,932	1	7,120	121	687,228	527	9,006,424
Parker	2	7,200	—	—	—	—	4	15,000	6	22,200
Somerton	15	287,295	—	—	—	—	3	21,154	18	308,449
Unincorporated	242	4,772,772	9	504,659	1	7,120	72	332,194	324	5,616,745
Wellton	1	37,160	—	—	—	—	1	22,400	2	59,560
Yuma	131	1,319,717	5	1,383,273	—	—	41	296,480	177	2,999,470
Total, Maricopa Co. 1st Quarter, 1982	4,893	116,943,788	438	107,648,242	102	36,119,505	4,305	49,622,912	9,738	310,334,447
Total, Maricopa Co. 1st Quarter, 1981	6,635	177,459,984	401	101,976,154	117	32,689,989	5,364	71,705,189	12,517	383,831,316
Percent Change	-26	-34	9	5	-12	10	-19	-30	-22	-19
Total, Arizona 1st Quarter, 1982	9,624	205,235,491	708	168,233,028	115	41,049,585	7,285	82,473,089	17,732	496,991,193
Total, Arizona 1st Quarter, 1981	12,621	285,616,284	753	253,868,819	145	34,641,676	8,416	92,248,597	21,935	666,375,376
Percent Change	-23	-28	-5	-33	-20	18	-13	-10	-19	-25

*Includes mobile homes N/R: No report.

Arizona New Housing Starts: Quarterly Report

FIRST QUARTER, 1982

BUILDING PERMITS ISSUED

	1 Family	Mobile Homes	Duplex	3-4 Families	5 or More	Total Housing Units
APACHE CO.	23	7	—	—	—	30
Eagar	4	2	—	—	—	6
St. Johns	4	5	—	—	—	9
Springerville	4	—	—	—	—	4
Unincorporated	11	—	—	—	—	11
COCHISE CO.	76	63	—	—	—	139
Benson	1	2	—	—	—	3
Bisbee	—	—	—	—	—	—
Douglas	1	8	—	—	—	9
Huachuca City	—	9	—	—	—	9
Sierra Vista	24	8	—	—	—	32
Tombstone	—	2	—	—	—	2
Unincorporated	45	30	—	—	—	75
Willcox	5	4	—	—	—	9
COCONINO CO.	61	69	1	1	2	149
Flagstaff	23	17	1	1	1	51
Fredonia	2	3	—	—	—	5
Page	1	25	—	—	—	26
Unincorporated	35	22	—	—	1	65
Williams	—	2	—	—	—	2
GILA CO.	57	39	—	—	—	96
Globe	1	—	—	—	—	1
Hayden	—	—	—	—	—	—
Miami	—	—	—	—	—	—
Payson	20	24	—	—	—	44
Unincorporated	36	15	—	—	—	51
GRAHAM CO.	11	42	—	—	1	59
Pima	1	7	—	—	—	8
Safford	1	1	—	—	1	8
Thatcher	3	10	—	—	—	13
Unincorporated	6	24	—	—	—	30
GREENLEE CO.	1	—	—	—	—	1
Clifton	—	—	—	—	—	—
Duncan	—	—	—	—	—	—
Unincorporated	1	—	—	—	—	1
MARICOPA CO.	2,303	367	56	119	89	4,546
Avondale	3	—	—	—	—	3
Buckeye	—	4	—	—	—	4
Chandler	199	—	4	—	1	215
El Mirage	—	—	—	—	—	—
Gila Bend	—	—	—	—	—	—
Gilbert	20	1	1	4	—	38
Glendale	169	—	—	—	—	169
Goodyear	—	—	—	—	—	—
Guadalupe	5	1	—	—	—	6
Mesa	261	—	9	6	7	329
Paradise Valley	16	—	—	—	—	16
Peoria	82	—	2	1	2	106
Phoenix	800	80	16	52	54	1,751
Scottsdale	205	—	—	—	15	374
Surprise	2	5	1	—	—	7
Tempe	96	—	3	21	9	244
Tolleson	—	—	—	—	—	—
Unincorporated	442	278	—	35	2	879
Wickenburg	2	—	—	—	1	7
Youngtown	1	—	—	—	—	1

N/R: No report.

BUILDING PERMITS ISSUED

	1 Family	Mobile Homes	Duplex	3-4 Families	5 or More	Total Housing Units
MOHAVE CO.	129	228	1	1	5	433
Kingman City	16	4	—	1	—	24
Kingman Area	9	65	—	—	—	74
Lake Havasu City	53	2	—	—	2	77
Lake Havasu Area	—	10	—	—	—	10
Mohave Valley N.	26	71	1	—	1	147
Mohave Valley S.	13	50	—	—	—	63
Dolan Springs	6	12	—	—	—	18
Sacramento Valley	3	11	—	—	—	14
Mohave General	3	3	—	—	—	6
NAVAJO CO.	38	26	—	—	—	64
Holbrook	N/R	N/R	N/R	N/R	N/R	N/R
Show Low	1	6	—	—	—	7
Snowflake	3	—	—	—	—	3
Taylor	4	—	—	—	—	4
Unincorporated	28	17	—	—	—	45
Winslow	2	3	—	—	—	5
PIMA CO.	515	532	14	6	12	2,201
Marana	—	2	—	—	—	2
Oro Valley	—	—	—	—	—	—
South Tucson	—	—	—	—	—	—
Tucson	159	151	14	6	9	1,377
Unincorporated	356	399	—	—	3	822
PINAL CO.	127	187	—	15	1	398
Apache Junction	42	95	—	12	—	185
Casa Grande	5	—	—	—	1	29
Coolidge	4	3	—	—	—	7
Eloy	4	—	—	—	—	4
Florence	5	1	—	2	—	14
Kearny	—	1	—	—	—	1
Mammoth	—	4	—	—	—	4
Superior	3	—	—	—	—	3
Unincorporated	64	83	—	1	—	151
SANTA CRUZ CO.	17	—	1	—	2	35
Nogales	N/R	N/R	N/R	N/R	N/R	N/R
Patagonia	1	—	—	—	—	1
Unincorporated	15	—	1	—	—	17
YAVAPAI CO.	242	111	2	2	3	412
Chino Valley	7	10	—	—	—	17
Clarkdale	5	—	—	—	—	5
Cottonwood	4	5	—	—	1	22
Jerome	—	—	—	—	—	—
Prescott	51	13	—	—	—	44
Prescott Valley	29	16	1	—	1	55
Unincorporated	166	69	1	2	1	269
YUMA CO.	43	233	—	—	3	331
Parker	—	—	—	—	—	—
Somerton	8	3	—	—	—	11
Unincorporated	32	175	—	—	—	207
Wellton	1	—	—	—	—	1
Yuma	2	55	—	—	3	112
Total, Maricopa Co., 1st Quarter, 1982	2,303	367	56	119	89	4,546
Total, Maricopa Co., 1st Quarter, 1981	3,698	618	58	55	112	6,690
Percent Change	-37	-40	-3	116	-20	-35
Total, Arizona, 1st Quarter, 1982	3,643	1,904	55	144	116	8,694
Total, Arizona, 1st Quarter, 1981	5,590	2,506	79	97	158	11,874
Percent Change	-34	-24	-30	48	-15	-26

Arizona New Housing Starts: Quarterly Report

SECOND QUARTER, 1982

BUILDING PERMITS ISSUED

	1 Family	Mobile Homes	Duplex	3-4 Families	5 or More	Total Housing Units
APACHE CO.	60	9	—	—	1	121
Eagar	20	5	—	—	1	77
St. Johns	1	4	—	—	—	5
Springerville	15	—	—	—	—	15
Unincorporated	24	—	—	—	—	24
COCHISE CO.	87	65	—	2	—	157
Benson	2	5	—	1	—	10
Bisbee	—	—	—	—	—	—
Douglas	2	1	—	—	—	3
Huachuca City	—	—	—	—	—	—
Sierra Vista	38	14	—	1	—	56
Tombstone	—	2	—	—	—	2
Unincorporated	45	40	—	—	—	85
Willcox	—	1	—	—	—	1
COCONINO CO.	165	177	6	1	15	570
Flagstaff	51	25	6	1	13	266
Fredonia	—	6	—	—	—	6
Page	5	50	—	—	—	55
Unincorporated	107	112	—	—	2	257
Williams	2	4	—	—	—	6
GILA CO.	78	57	—	1	—	139
Globe	1	—	—	—	—	1
Hayden	—	—	—	—	—	—
Miami	—	—	—	—	—	—
Payson	21	40	—	—	—	61
Unincorporated	56	17	—	1	—	77
GRAHAM CO.	9	38	—	—	—	47
Pima	1	4	—	—	—	5
Safford	2	1	—	—	—	3
Thatcher	—	7	—	—	—	7
Unincorporated	6	26	—	—	—	32
GREENLEE CO.	2	—	—	—	—	2
Clifton	—	—	—	—	—	—
Duncan	2	—	—	—	—	2
Unincorporated	—	—	—	—	—	—
MARICOPA CO.	5,003	354	25	67	96	4,729
Avondale	5	4	—	1	—	11
Buckeye	1	3	—	—	—	4
Chandler	250	—	—	4	19	499
El Mirage	—	1	—	—	—	1
Gila Bend	—	—	—	—	—	—
Gilbert	53	2	—	1	—	59
Glendale	210	—	—	—	2	225
Goodyear	—	—	—	—	—	—
Guadalupe	3	—	—	—	—	3
Mesa	409	—	2	19	6	575
Paradise Valley	18	—	—	—	—	18
Peoria	112	—	2	—	4	148
Phoenix	1,116	76	16	37	48	1,886
Scottsdale	226	—	1	—	8	342
Surprise	1	—	—	—	—	1
Tempe	146	—	1	1	6	199
Tolleson	1	—	—	—	—	1
Unincorporated	472	268	—	4	2	767
Wickenburg	2	—	1	—	1	12
Youngtown	—	—	—	—	—	—

N/R: No report.

BUILDING PERMITS ISSUED

	1 Family	Mobile Homes	Duplex	3-4 Families	5 or More	Total Housing Units
MOHAVE CO.	119	235	—	3	—	364
Kingman City	12	5	—	—	—	17
Kingman Area	7	68	—	—	—	75
Lake Havasu City	36	1	—	4	—	41
Lake Havasu Area	—	5	—	—	—	5
Mohave Valley N	27	68	—	2	—	101
Mohave Valley S	17	44	—	—	—	61
Dolan Springs	7	19	—	—	—	26
Sacramento Valley	6	23	—	—	—	29
Mohave General	7	4	—	—	—	11
NAVAJO CO.	161	110	—	2	5	278
Holbrook	2	—	—	—	—	2
Show Low	5	22	—	—	—	27
Snowflake	12		—	—	—	12
Taylor	—	2	—	—	—	2
Unincorporated	140	84	—	2	5	231
Winslow	2	2	—	—	—	4
PIMA CO.	510	489	14	6	14	2054
Marana	1	5	—	—	—	6
Oro Valley	11		—	—	—	11
South Tucson	—	—	—	—	—	—
Tucson	152	120	15	6	15	1,228
Unincorporated	566	364	1		1	809
PINAL CO.	71	154	—	14	—	283
Apache Junction	46	62	—	15	—	152
Casa Grande	8	—	—	—	—	8
Coolidge	—	2	—	—	—	2
Eloy		2	—	—	—	2
Florence	—	—	—	—	—	—
Kearny		2	—	—	—	2
Mammoth		1	—	—	—	1
Superior	—	—	—	—	—	—
Unincorporated	47	85		1	—	136
SANTA CRUZ CO.	20	3	—	1	—	26
Nogales	N/R	N/R	N/R	N/R	N/R	N/R
Patagonia	—	3	—	—	—	5
Unincorporated	20	—	—	1	—	23
YAVAPAI CO.	195	119	6	—	1	338
Chino Valley	4	16	—	—	—	20
Clarkdale	2	2	—	—	—	4
Cottonwood	7	4	1	—	—	13
Jerome	—	—	—	—	—	—
Prescott	42	12	3	—	—	60
Prescott Valley	23	20	2	—	—	47
Unincorporated	117	65	—	—	1	194
YUMA CO.	87	151	—	—	1	246
Parker	—	2	—	—	—	2
Somerton	—	—	—	—	—	—
Unincorporated	74	121				195
Wellton	—	—	—	—	—	—
Yuma	13	28	—	—	1	49
Total, Maricopa Co., 2nd Quarter, 1982	5,003	354	23	67	96	4,729
Total, Maricopa Co., 2nd Quarter, 1981	4,603	1,491	129	107	118	13,071
Percent Change	-34	-76	-82	-37	-18	-65
Total, Arizona, 2nd Quarter, 1982	4,567	1,959	49	97	151	9,554
Total, Arizona, 2nd Quarter, 1981	6,715	3,080	185	143	152	17,596
Percent Change	-31	-36	-73	-32	13	-46

Arizona Building Permits: Quarterly Report

SECOND QUARTER, 1982

	*RESIDENTIAL**		*COMMERCIAL*		*INDUSTRIAL*		*OTHER*		*TOTAL*	
	Number of Permits	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*
APACHE COUNTY	80	1,694,069	19	699,700	—	—	18	106,250	117	2,500,019
Eagar	27	1,074,000	2	375,000	—	—	15	16,750	42	1,465,750
St. Johns	10	—	1	—	—	—	1	—	12	—
Springerville	15	—	3	—	—	—	1	—	19	—
Unincorporated	28	620,069	13	324,700	—	—	3	89,500	44	1,034,269
COCHISE COUNTY	270	4,850,511	33	4,288,856	2	27,800	332	2,479,626	637	11,646,793
Benson	21	177,444	1	17,500	—	—	10	113,440	32	308,384
Bisbee	9	54,666	—	—	—	—	9	37,400	18	92,066
Douglas	19	186,668	4	1,058,169	—	—	51	120,457	74	1,365,294
Huachuca City	15	31,912	—	—	1	20,000	—	—	16	51,912
Sierra Vista	71	1,485,814	13	2,871,457	—	—	204	433,645	288	4,790,896
Tombstone	11	25,950	3	14,950	—	—	3	3,175	17	44,075
Unincorporated	114	2,865,007	10	325,200	—	—	43	1,744,219	167	4,950,426
Willcox	10	25,050	2	5,600	1	7,800	12	27,290	25	65,740
COCONINO COUNTY	544	10,725,840	30	6,497,527	4	6,526,500	171	7,596,698	749	31,346,565
Flagstaff	124	4,457,069	22	4,380,658	4	6,526,500	68	7,124,447	218	22,488,654
Fredonia	6	—	1	25,000	—	—	3	4,000	10	29,000
Page	56	360,547	1	132,042	—	—	29	41,500	86	534,089
Unincorporated	348	5,765,464	3	1,859,638	—	—	39	387,862	390	8,012,964
Williams	10	142,760	3	100,209	—	—	32	38,889	45	281,858
GILA COUNTY	238	2,391,452	3	452,100	7	158,652	57	132,069	305	3,134,273
Globe	16	75,950	—	—	—	—	6	7,060	22	83,010
Hayden	—	—	—	—	—	—	1	500	1	500
Miami	6	22,000	—	—	—	—	1	16,000	7	38,000
Payson	112	644,928	1	79,000	7	158,652	30	21,448	150	884,028
Unincorporated	104	1,648,574	2	373,100	—	—	19	87,061	125	2,108,735
GRAHAM COUNTY	108	1,166,306	6	77,000	1	1,800,000	16	894,675	131	3,937,981
Pima	10	91,900	—	—	—	—	8	3,585	18	95,485
Safford	29	190,501	4	37,000	—	—	4	3,450	37	230,951
Thatcher	17	225,800	—	—	—	—	4	887,640	21	1,113,440
Unincorporated	52	658,105	2	40,000	1	1,800,000	—	—	55	2,498,105
GREENLEE COUNTY	7	66,700	1	41,000	1	151,000	2	1,400	11	260,100
Clifton	2	4,000	—	—	—	—	—	—	2	4,000
Duncan	4	58,700	—	—	—	—	—	—	4	58,700
Unincorporated	1	4,000	1	41,000	1	151,000	2	1,400	5	197,400
MARICOPA COUNTY	5,434	136,743,239	378	97,085,178	117	22,287,969	5,310	73,844,758	11,239	329,961,144
Avondale	10	122,145	1	87,000	—	—	37	100,495	48	309,640
Buckeye	6	51,600	—	—	—	—	—	—	6	51,600
Chandler	361	8,306,429	26	4,545,040	2	328,000	491	2,476,620	880	15,656,089
El Mirage	7	43,950	—	—	—	—	3	65,000	10	108,950
Gila Bend	1	1,495	—	—	—	—	7	31,650	8	33,145
Gilbert	50	1,406,708	2	97,228	—	—	32	481,088	84	1,985,024
Glendale	286	6,306,570	12	1,166,723	1	171,000	588	1,857,505	887	9,501,798
Goodyear	4	3,600	—	—	4	192,605	25	94,739	33	290,944
Guadalupe	4	60,532	2	1,828,700	—	—	2	32,000	8	1,921,232
Mesa	520	16,678,679	42	9,984,162	8	1,240,020	966	26,718,583	1,536	54,621,444
Paradise Valley	68	4,297,311	—	—	—	—	78	746,941	146	5,044,252
Peoria	142	3,096,820	9	1,633,233	—	—	165	599,292	316	5,329,345
Phoenix	2,016	48,785,479	148	49,196,392	26	5,669,334	1,702	51,176,940	3,892	154,828,145
Scottsdale	293	15,938,733	29	17,235,928	1	563,910	525	4,021,052	848	37,759,623
Surprise	4	32,600	1	26,400	1	120,000	16	599,206	22	778,206
Tempe	291	10,652,400	68	4,096,300	74	14,003,100	184	1,777,900	617	30,529,700
Tolleson	22	83,883	—	—	—	—	7	57,716	29	141,599
Unincorporated	1,328	20,587,297	35	6,972,250	—	—	464	2,858,665	1,827	30,418,212
Wickenburg	6	96,860	2	350,000	—	—	10	31,431	18	478,291
Youngtown	15	10,148	1	65,822	—	—	8	117,935	24	193,905

Arizona Building Permits: Quarterly Report (Continued)

SECOND QUARTER, 1982

	*RESIDENTIAL**		*COMMERCIAL*		*INDUSTRIAL*		*OTHER*		*TOTAL*	
	Number of Permits	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*
MOHAVE COUNTY	743	8,420,820	50	5,334,562	—	—	700	1,357,249	1,493	15,112,631
Kingman City	74	737,234	14	930,945	—	—	12	39,021	100	1,707,198
Kingman Area	141	1,211,304	9	276,224	—	—	129	144,282	279	1,631,810
Lake Havasu City	67	1,672,055	5	1,222,635	—	—	77	279,665	149	3,174,355
Lake Havasu Area	12	56,996	—	—	—	—	20	23,534	32	80,530
Mohave Valley N	223	2,338,457	12	2,489,064	—	—	250	396,542	485	5,224,063
Mohave Valley S	125	1,198,321	3	75,720	—	—	127	222,246	255	1,496,287
Dolan Springs	47	427,652	2	66,816	—	—	41	48,990	90	543,458
Sacramento Valley	38	433,278	—	—	—	—	27	186,273	65	619,551
Mohave General	16	352,525	5	273,160	—	—	17	29,896	38	655,581
NAVAJO COUNTY	421	7,696,993	15	1,015,940	5	117,350	103	479,945	542	9,310,228
Holbrook	2	64,700	1	2,000	—	—	4	3,050	7	69,750
Show Low	48	805,414	1	187,200	—	—	52	56,500	101	1,049,114
Snowflake	16	—	—	—	—	—	—	—	16	—
Taylor	4	2,500	1	—	—	—	—	—	5	2,500
Unincorporated	334	6,659,179	9	784,740	5	117,350	39	387,195	387	7,948,464
Winslow	17	165,200	1	42,000	—	—	8	33,200	26	240,400
PIMA COUNTY	1,749	35,451,548	130	55,307,081	4	3,100,000	1,509	23,269,967	3,392	117,128,596
Marana	6	—	—	—	—	—	2	—	8	—
Oro Valley	14	1,309,000	51	13,400,000	—	—	9	50,498	74	14,759,498
South Tucson	29	88,705	1	22,000	—	—	17	36,800	47	147,505
Tucson	649	8,501,043	58	35,084,981	1	100,000	572	9,737,069	1,280	53,423,093
Unincorporated	1,051	25,552,800	20	6,800,100	3	3,000,000	909	13,445,600	1,983	48,798,500
PINAL COUNTY	344	4,421,539	32	4,087,844	4	271,912	175	3,523,329	555	12,304,624
Apache Junction	98	1,377,286	21	1,895,696	—	—	87	3,090,944	206	6,363,926
Casa Grande	40	587,290	4	2,073,005	1	222,912	13	204,489	58	3,087,694
Coolidge	33	60,530	3	—	—	—	1	8,000	37	68,530
Eloy	4	3,500	—	—	—	—	9	80,650	13	84,150
Florence	1	1,000	1	145	—	—	11	24,033	13	25,178
Kearny	3	13,500	1	56,000	—	—	1	3,000	5	72,500
Mammoth	1	—	—	—	—	—	—	—	1	—
Superior	7	12,710	—	—	—	—	5	5,950	12	18,660
Unincorporated	157	2,365,923	2	63,000	3	49,000	48	106,263	210	2,584,186
SANTA CRUZ COUNTY	32	1,105,700	2	59,000	—	—	12	45,323	46	1,210,023
Nogales	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Patagonia	4	39,000	—	—	—	—	5	2,902	9	41,902
Unincorporated	28	1,066,700	2	59,000	—	—	7	42,421	37	1,168,121
YAVAPAI COUNTY	504	10,698,219	22	1,692,790	3	96,000	316	1,303,425	845	13,790,434
Chino Valley	34	404,135	2	30,000	—	—	20	34,250	56	468,385
Clarkdale	15	182,760	—	—	—	—	—	—	15	182,760
Cottonwood	29	337,031	4	5,350	—	—	24	101,211	57	443,592
Jerome	8	8,750	—	—	—	—	—	—	8	8,750
Prescott	120	2,849,331	2	218,240	—	—	186	666,179	308	3,733,750
Prescott Valley	72	924,931	3	230,200	3	96,000	—	—	78	1,251,131
Unincorporated	226	5,991,281	11	1,209,000	—	—	86	501,785	323	7,702,066
YUMA COUNTY	351	7,077,787	17	5,213,169	3	277,793	111	1,662,883	482	14,231,632
Parker	5	17,000	—	—	—	—	9	156,590	14	173,590
Somerton	8	66,292	—	—	—	—	7	42,760	15	109,052
Unincorporated	222	5,683,458	6	465,536	1	150,000	45	639,837	274	6,936,831
Wellton	—	—	—	—	—	—	—	—	—	—
Yuma	116	1,311,037	11	4,749,633	2	127,793	50	823,696	179	7,012,159
Total, Maricopa Co. 2nd Quarter, 1982	5,434	136,743,239	378	97,085,178	117	22,287,969	5,310	73,844,758	11,239	329,961,144
Total, Maricopa Co. 2nd Quarter, 1981	8,376	231,257,549	832	221,813,468	134	28,518,419	5,935	50,849,803	15,277	532,439,239
Percent Change	-35	-40	-54	-56	-12	-21	-10	45	-26	-38
Total, Arizona 2nd Quarter, 1982	10,825	252,510,723	736	181,851,747	151	34,794,976	8,832	116,697,597	20,544	585,855,043
Total, Arizona 2nd Quarter, 1981	14,704	360,382,386	1,227	287,008,174	157	30,562,572	9,566	75,084,521	25,654	753,037,653
Percent Change	-26	-35	-40	-36	-3	13	-7	55	-19	-24

*Includes mobile homes N/R: No report.

Metropolitan Phoenix Consumer Price Index

SECOND QUARTER, 1982

Prices of goods and services in the Phoenix Metropolitan Area showed only a slight increase (0.5 percent) during the second quarter of 1982, down from the 1.6 percent increase of the previous quarter. The increase in the second quarter is the smallest since the second quarter of 1980.

The Consumer Price Index (CPI) for the Phoenix Metropolitan Area, on which these inflation figures are based, is prepared by the Bureau of Business and Economic Research, College of Business Administration at Arizona State University. The quarterly CPI is based on comprehensive surveys conducted by the Bureau in cooperative cosponsorship with Valley National Bank.

The category of *Food* rose slightly in the second quarter, increasing 1.2 percent, comparable to the 1.5 percent increase in the first quarter of 1982. Food at Home showed an increase of 1.4 percent, while Food Away From Home increased only 0.6 percent. The largest increases were found in Meats, Poultry, Fish, and Eggs, which rose 2.8 percent, and in Fruits and Vegetables, which rose 1.9 percent. Smaller increases were noted in Dairy Products (0.8 percent), Other Food at Home (0.5 percent), and Cereals and Bakery Products (0.4 percent).

In the subcategory of Meats, Poultry, Fish, and Eggs, other meats increased 5.9 percent; beef increased 4.1 percent, and pork increased 3.1 percent. These increases were partially offset by a large decline in egg prices (-9.5 percent); prices of eggs are only 0.7 percent higher than one year ago.

Fresh vegetable prices decreased by 5.6 percent, while fresh fruits soared 9.6 percent. This increase in fresh fruits ended a slowing trend which had begun in the second quarter of 1981. Nevertheless, fresh fruit prices showed a decrease of 7.4 percent from one year ago. Dairy Products continued to remain fairly steady with an overall increase of 0.8 percent. Increases of 2.3 percent in the subcategory, "other dairy products" were offset by decreases in fresh milk and cream (-0.3 percent). A variety of dairy products (with the exception of butter, cheese, and ice cream) were the major contributors to the rise.

Cola drinks, excluding diet cola, rose 6.1 percent, while other carbonated drinks plunged 6.3 percent. This caused Other Food at Home to remain relatively unchanged. Other increases were noted in freeze-dried and instant coffee (2.6 percent) and salads, desserts and baby foods (2.5 percent), while decreases were recorded for nuts, potato chips, other snacks (-5.9 percent) as well as olives, pickles and relishes (-2.4 percent).

Cereals and Bakery Products continued the decreasing trend which began in the first quarter of 1981. Cereal and cereal products decreased 1.0 percent; bakery products showed a modest increase of 0.9 percent. Most items showed only modest price changes.

The price index for *Housing* posted a 0.4 percent increase, the smallest increase since the first quarter of 1980. Increases in Fuel and Other Utilities (6.6 percent) and in Household Furnishings and Operations (1.0 percent) acted to moderate the decline of 0.7 percent in the costs of Shelter. Despite an increase of 1.5 percent in Residential Rent, Shelter costs declined because of a 1.3 percent decline in Homeownership expenses, due primarily to a 4.6 percent drop in the Contracted Mortgage Interest Cost. Home purchase prices rose only 0.4 percent, although lodging while out of town, and maintenance and repair services increased 6.6 percent and 10.9 percent respectively. The increase in Fuel and Other Utilities was due primarily to the 13.3 percent jump in the cost of electricity. In the category of Household Furnishings and Operations, increases in textile furnishings (4.9 percent) and in other household equipment (5.4 percent) offset the declines in furniture (-0.9 percent), household appliances (-0.3 percent), and television, radio, and sound equipment (-0.1 percent).

Apparel and Upkeep, with a 3.5 percent gain, registered the largest increase among the seven major categories of the Consumer Price Index. Men's and Boys' Apparel was the major contributor to this increase (9.9 percent). In comparison, Women's and Girls' Apparel increased a modest 1.1 percent. Both women's and girls' separates and sportswear prices declined (-3.1 percent for women's apparel, and -4.3 percent for girls'), while sleepwear, undergarments, and hosiery prices increased.

Transportation costs in the Phoenix Metropolitan Area decreased in the second quarter by 0.9 percent. This represents the second consecutive quarter of decreases in this category, and resulted in only a 1.1 percent increase over the last year. Private Transportation costs declined by 0.3 percent, due largely to the continued decrease in gasoline prices (-4.7 percent). This decrease was partially offset early in the quarter by increased prices for used automobiles (4.7 percent) and for vehicle maintenance and repairs (1.5 percent). Public Transportation fell 10.1 percent, with the largest decrease in airline fares in recent years (-16.7 percent).

Medical Care costs rose again this quarter, but to a lesser degree than last quarter's increase of 4.7 percent. The 0.9 percent increase in *Medical Care* for second quarter, 1982, is attributed in part to increases in prescription drugs, nonprescription drugs and medical supplies (3.9 percent and 1.8 percent respectively.) In this category, professional services showed an increase of 0.8 percent, while hospital and other medical care services showed no change.

Entertainment costs, following the previous quarter's 2.8 percent increase, declined 1.4 percent in the second quarter. The decline was due mainly to a 6.2 percent decrease in the price of admissions and fees, although the cost of sporting goods and equipment also declined by 1.6 percent.

Other Goods and Services increased by 2.3 percent, and included increases in cosmetics, bath and nail preparations (9.8 percent) and tuition and other educational fees (5.5 percent).

The quarterly increase in the Metropolitan Phoenix Consumer Price Index, while comparable to the increase in Los Angeles, was smaller than the increases in Chicago and the United States as a whole. The small increase in Phoenix area *Housing* (0.4 percent) was significantly below that for the United States (2.1 percent) and Chicago (9.6 percent). *Medical Care* price increases in Phoenix were also lower than the three comparison figures. However, Phoenix *Apparel and Upkeep* cost increases (3.5 percent) were nearly twice the national figure (1.9 percent). The accompanying table shows detailed comparisons between Chicago, Los Angeles, and the United States as a whole.

One Year Percentage Changes

The Metropolitan Phoenix percentage change in *All Items* from one year ago (6.7 percent) is equal to that of the United States (6.7 percent), and less than in Chicago (8.8 percent) and Los Angeles (7.4 percent). The one-year price increases for the Phoenix area are larger than in the comparison cities in the categories of *Apparel and Upkeep* and *Entertainment*. However, in the categories of *Housing* and *Transportation*, the increases over the past year in Phoenix have been less than in each of the other areas.

METROPOLITAN PHOENIX CONSUMER PRICE INDEX
SECOND QUARTER, 1982
(1977=100)

Group	*Last Qtr. Index*	*This Qtr. Index*	*Percentage Change*	*Year Ago Change*	*1969 Base Index*
ALL ITEMS	168.1	168.9	0.5	6.7	262.5
Food and Beverages	152.3	154.0	1.1	4.9	240.7
Food	153.1	154.9	1.2	4.8	246.1
Food at Home	153.0	155.2	1.4	5.1	257.5
Cereals and Bakery Products	156.3	156.8	0.4	5.0	255.3
Meats, Poultry, Fish, and Eggs	150.6	154.8	2.8	7.4	246.3
Dairy Products	148.3	149.5	0.8	2.0	225.6
Fruits and Vegetables	152.5	155.4	1.9	-2.6	268.0
Other Food at Home	145.8	146.5	0.5	4.6	283.8
Food Away From Home	151.0	151.9	0.6	4.4	223.1
Housing	187.1	187.8	0.4	8.4	271.9
Shelter	206.3	204.8	-0.7	6.8	284.4
Rent, Residential	140.6	142.8	1.5	6.2	193.1
Homeownership	230.1	227.2	-1.3	7.1	303.3
Homeowners' Financing, Taxes & Insurance	238.1	234.2	-1.6	6.8	0.0
Mortgage Interest Rates	200.6	190.6	-5.0	5.8	0.0
Home Purchase	191.3	192.0	0.4	5.6	0.0
Fuel and Other Utilities	144.6	154.2	6.6	22.1	307.1
Gas & Electricity	161.3	178.6	10.7	31.6	0.0
Household Furnishings and Operations	137.1	138.4	1.0	6.4	214.4
Apparel and Upkeep	130.0	134.5	3.5	9.1	196.2
Transportation	162.6	161.2	-0.9	1.1	268.4
Private Transportation	159.6	159.1	-0.3	1.1	265.1
New and Used Cars	149.3	152.8	2.4	9.7	0.0
Gasoline	210.3	200.4	-4.7	-10.8	0.0
Public Transportation	219.3	197.1	-10.1	-0.8	318.8
Medical Care	163.8	165.3	0.9	12.1	364.0
Entertainment	154.8	152.7	-1.4	7.7	222.2
Other Goods and Services	134.1	137.2	2.3	7.6	246.5

A 0.0 in the last column indicates that 1969 base index is not available.

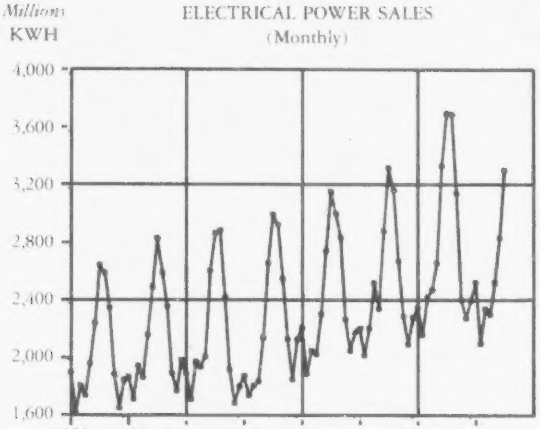
METROPOLITAN PHOENIX CONSUMER PRICE INDEX
UNITED STATES AND COMPARATIVE CITIES
SECOND QUARTER, 1982

	United States		*Chicago*		*Los Angeles*	
Group	*Percentage Change From Last Quarter*	*Percentage Change From One Year Ago*	*Percentage Change From Last Quarter*	*Percentage Change From One Year Ago*	*Percentage Change From Last Quarter*	*Percentage Change From One Year Ago*
ALL ITEMS	1.3	6.7	4.7	8.8	0.5	7.4
Food	0.8	4.8	1.9	4.2	1.0	4.9
Food at Home	0.7	4.5	1.1	3.8	0.5	4.6
Food Away From Home	1.2	5.4	3.6	5.1	2.2	5.5
Housing	2.1	8.8	9.6	14.3	0.6	8.7
Shelter	2.2	9.1	12.3	16.4	0.0	8.4
Fuel and Utilities	2.5	9.7	4.3	11.9	7.7	20.1
Household Furnishings & Operations	1.4	6.0	2.6	7.2	-0.4	4.1
Apparel and Upkeep	1.9	2.7	1.9	3.8	2.7	-3.9
Transportation	-0.8	2.8	-0.8	2.7	-0.6	6.2
Medical Care	2.4	12.0	2.1	9.1	2.8	18.5
Entertainment	1.4	6.4	-0.2	6.0	2.4	7.1
Other Goods and Services	1.9	9.8	0.1	7.0	1.1	8.7

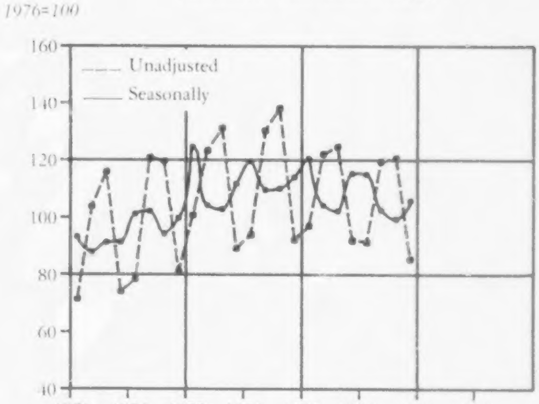
Source: Metropolitan Phoenix data compiled by the Bureau of Business and Economic Research, College of Business Administration, Arizona State University, in cooperative cosponsorship with Valley National Bank; other data from U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Economic Indicators

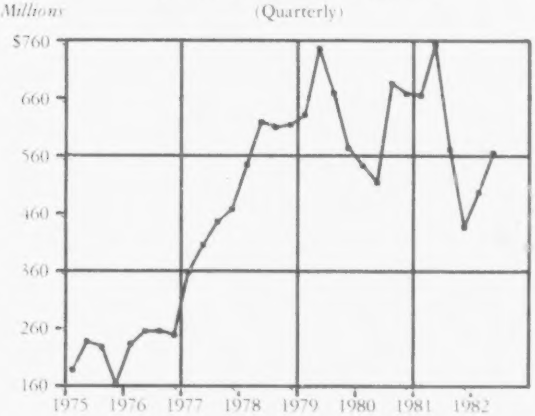
ELECTRICAL POWER SALES
(Monthly)



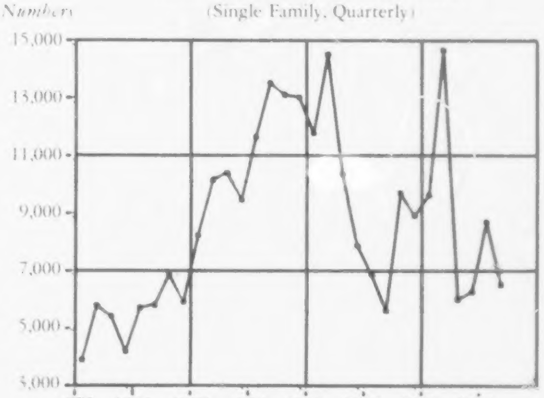
ARIZONA TOURISM INDEX



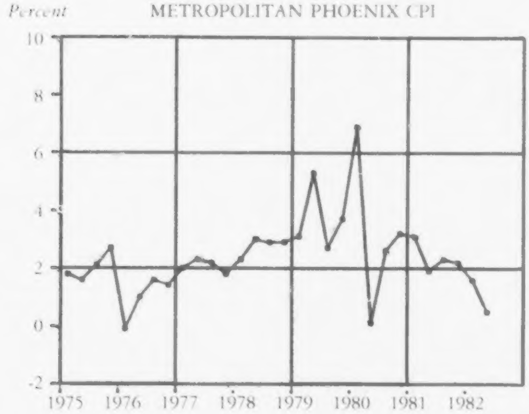
ARIZONA BUILDING PERMITS
(Quarterly)



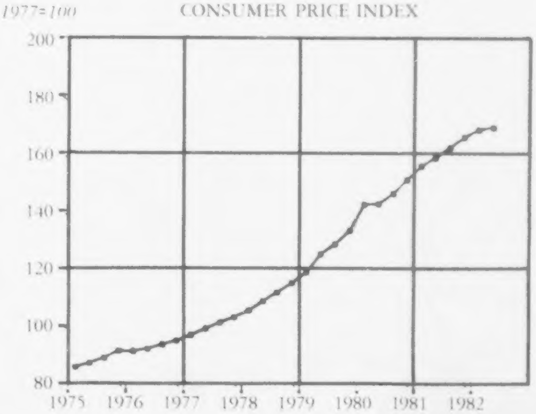
ARIZONA NEW HOUSING STARTS
(Single Family, Quarterly)



QUARTERLY CHANGE IN
METROPOLITAN PHOENIX CPI



METROPOLITAN PHOENIX
CONSUMER PRICE INDEX



Source: All data compiled by the Bureau of Business and Economic Research, College of Business Administration, Arizona State University.